CONTENTS OF SUPPLEMENT.


| | |
|---|---|
| PERSONAL | 25 |
| Obituary | 25 |
| ENGINEERING SOCIETIES | 25 |
| Coming Technical Meetings | 25 |
| CONSTRUCTION NEWS: | |
| Condensed List of Contracts Pending | 26 |
| Railways | 27 |
| Street and Electric Railways | 27 |
| Electric Light and Power | 28 |
| Bridges | 28 |
| Buildings | 29 |
| Water-Works | 29 |
| Irrigation | 30 |
| Sewerage | 30 |
| Garbage Disposal and Street Cleaning | 30 |
| Streets and Roads | 31 |
| Manufacturing Plants | 31 |
| Gas Plants | 31 |
| Miscellaneous Contracts | 31 |
| Contract Prices | 32 |
| INDUSTRIAL NOTES | 32 |


## PERSONAL.

Mr. W. G. Sharp, civil engineer, of Salt Lake City, Utah, was married recently to Miss Hester Harkness.

Mr. Walter H. Knight, M. Am. Soc. C. E., of New York city, has been appointed Chief Engineer of the International Air Power Co., of that city.

Mr. J. W. Cleveland has been appointed Secretary and Superintendent of the water-works at Georgetown, Tex., to succeed Mr. E. E. Taylor, resigned.

Mr. L. E. Dewey has been appointed General Manager of the Detroit & Lima Northern Ry., a newly created position, with headquarters in Detroit, Mich.

Mr. Geo. T. Whitmore, formerly General Manager of the Summit Sewer Pipe Co., Akron, O., has been appointed Manager of the Mexico City Mfg. Co., Mexico, Mex., succeeding Mr. Henry Robinson.

Mr. A. M. Jordan has been elected President of the Atlantic City Sewerage Co., Atlantic City, N. J. Mr. A. S. Chandler has been elected Vice-President, and Mr. E. C. Paucher, Secretary and Treasurer.

Mr. George H. Pegram, M. Am. Soc. C. E., Consulting Engineer of the Manhattan Ry. of New York city, has been appointed Chief Engineer to succeed Mr. John Waterhouse, who has been appointed Consulting Engineer. Mr. Pegram was formerly with the Union Pacific R. R.

Mr. Edmund Pennington, General Superintendent of the Minneapolis, St. Paul & Sault Ste. Marie Ry., with headquarters in Minneapolis, Minn., has been appointed General Manager, to succeed Mr. F. D. Underwood, who has been made General Manager of the Baltimore & Ohio R.R.

Mr. F. Sodemann, civil engineer, for several years Assistant Engineer of the Jackson Architectural Iron Works, New York city, has resigned, and has opened an office in the Mohawk Building, 160 Fifth Ave., in the same city, as a consulting engineer, making a specialty of architectural and structural work.

Mr. John T. Cavanagh has been appointed Commissioner of Public Works; Mr. Peter J. Williams, City Engineer, and Mr. A. F. Schenkelberger, Sewer Commissioner, of Quincy, Mass., by Mayor Keith. The Board of Water Commissioners has been abolished, and the Commissioner of Public Works will hereafter have charge of the water system.

Mr. H. Middaugh, Supervisor of Bridges and Track of the Seattle & International Ry., with headquarters at Seattle, Wash., has resigned to accept a similar position with the White Pass & Yukon R. R. Mr. J. M. Campbell, Road Master of the Washington & Columbia River Ry., with headquarters at Hunt's Junction, Wash., has been appointed to succeed Mr. Middaugh.

Mr. J. A. L. Waddell, M. Am. Soc. C. E., of the firm of Waddell & Hedrick, consulting engineers of Kansas City, Mo., the forming of which partnership was noted in our issue of Jan. 12, has been commissioned to go to Japan to prepare bridge plans for the Nippon Ry., and will open an office in that country. Mr. Waddell has also established branch offices in Havana, Cuba, and in the City of Mexico.

Prof. John Butler Johnson, M. Am. Soc. C. E., Professor of Civil Engineering in Washington University, St. Louis, Mo., has been appointed Dean of the College of Mechanics and Engineering of the University of Wisconsin, Madison, Wis. Professor Johnson is also a member of the Institution of Civil Engineers, of England, and of the American Society of Mechanical Engineers. He is the author of a number of books on engineering subjects, among them "Engineering Contracts and Specifications" and "Modern Framed Structures."

Mr. Eugene J. Buffington has been elected President of the Illinois Steel Co., Chicago, Ill., to succeed Mr. John W. Gates, whose resignation to accept the Presidency of the American Steel & Wire Co., was noted in our issue of Jan. 12. Mr. Wm. P. Palmer, Second Vice-President of the former company, has resigned, and Mr. T. J. Hyman has been elected Secretary, to succeed Mr. W. A. Green, resigned. The sales department will be in charge of Mr. George Baker, Assistant General Sales Agent, who succeeds Mr. A. M. Crane, General Sales Agent, resigned.

Mr. W. J. Sherman, of the firm of Riggs & Sherman, civil and consulting engineers, Toledo, O., has been selected by the Toledo Centennial Commission as the Chief Engineer and expert on grounds for the coming Ohio Centennial, to be held in Toledo. Mr. Sherman was Chief Engineer of the Wheeling & Lake Erie Ry. for many years. He made the preliminary surveys for the park in which the exhibition will be held, and has handled the expert affairs of the commission since its organization. Among the other appointments to the expert commission are: Mr. M. L. Moore, Superintendent of Parks, of Toledo, as Landscape Engineer, with Mr. Geo. E. Kessler, Kansas City, Mo., as Consulting Engineer, and Mr. D. L. Stine, of Toledo, as Architect.

Major Francis Lowell Hills, M. Am. Soc. C. E., Chief Engineer of the Wilmington & Northern R. R., with headquarters in Wilmington, Del., has been appointed Engineer-in-Charge of Public Improvements in the island of Porto Rico, on the recommendation of the Chief of Engineers, U. S. Army. Major Hills was appointed to the U.S. Military Academy from Massachusetts in 1862, and graduated in 1866, being assigned as a second lieutenant to the artillery branch of the army. At the time of the threatened trouble with Spain in 1869, he was placed in charge of ordnance work at Dry Tortugas, Fla., where he contracted fever, which caused his resignation from the army. Since that time he has followed civil engineering as a profession, and has been Chief Engineer of the Wilmington & Northern R. R. for the past 14 years.

## OBITUARY.

Mr. Patrick Fitzsimmons, contractor and builder, of New Orleans, La., died Jan. 17, aged 77.

Mr. Albert W. Greenleaf, a member of the Board of Water Commissioners, of Newburyport, Mass., died recently.

Mr. George Penn, proprietor of the Penn Spring Works, Baldwinsville, N. Y., died at his home in Syracuse, N. Y., Jan. 20, aged 57.

Mr. Samuel R. Parke, Treasurer of the Parkesburg Iron Co., and Vice-President of the Parkesburg Water Co., of Parkesburg, Pa., died Jan. 12, aged 65.

Mr. Caleb Lombard, for 24 years past the Superintendent of the Water Department of Chelsea, Mass., died Jan. 20. He was born in Wellfleet, Mass., Oct. 20, 1817, and went to Chelsea 45 years ago. From 1880 to 1895 he was a member of the Chelsea Board of Health.

Prof. Cummings Cherry, Sr., geologist and author of geological treatises, died at his home in Chicago, Ill., Jan. 24, aged 84. He was a native of Scotland, and went to California about 65 years ago. In 1860 he moved to Pittsburg and ten years later to Chicago.

Mr. James Cook Kingsley, mining engineer, died in San Salvador, Central America, where he owned a mine, Dec. 23, last, aged 40. He graduated from the Rensselaer Polytechnic Institute, Troy, N. Y., in 1876, and from the School of Mines in Freiburg, Germany, in 1881.

Mr. John R. Wagner, Superintendent of Motive Power, of the Delaware, Susquehanna & Schuylkill R. R., and Superintendent of the Coxe Mfg. Co., died of pneumonia at his home in Drifton, Pa., Jan. 21. He was a graduate of Lehigh University, South Bethlehem, Pa.

Gen. Michael Annenkoff, civil engineer, who constructed the Trans-Caspian Ry., died in St. Petersburg, Russia, Jan. 22, aged 60. He was born in St. Petersburg. During the Polish insurrection of 1866 he was promoted to Colonel for distinguished services. He was a Russian military attache with the German Army during the Franco-Prussian War, after which he was assigned to the work of constructing railways in Russia.

Gen. Selden Erastus Marvin, President of the Hudson River Telephone Co., died in Albany, N. Y., Jan. 19. He was born in Jamestown, N. Y., Aug. 20, 1835, and served through the Civil War. He organized the Albany & Rensselaer Iron & Steel Co., in 1875, and became its Secretary and Treasurer. The Troy Steel & Iron Co. succeeded this company, and General Marvin retained his position with it until the business was closed in 1895.

Mr. Henry Sedley, editor and journalist, died at his home in New York city, Jan. 20, aged 68. He graduated from the Rensselaer Polytechnic Institute, Troy, N. Y., as a civil engineer, and was a surveyor in San Francisco, Cal., for some time. After a tour of the world he became Assistant Editor of the "Commercial and Enquirer," of New York, and later held a similar position on the "Evening Post," of the same city. He was also part owner of the "Commercial Advertiser," of New York.

Major Jed Hotchkiss, consulting mining engineer, who was Chief Engineer on the staff of "Stonewall" Jackson, the Confederate general, during the Civil War, died at his home in Stanton, Va., Jan. 17. He was born in Windsor, N. Y., Nov. 30, 1828, and moved to Virginia when a young man, where he took up the study of civil and mining engineering. He was made a member of the American Association for the Advancement of Science, the National Geographical Society, and the American Society of Civil Engineers. He was also a frequent contributor to scientific journals and read papers before the British Association for the Advancement of Arts, and the Royal Society of Arts of London, of both of which societies he was elected a member. When the Civil War broke out he cast his lot with the Confederate cause, and was an engineer with Gen. Robert E. Lee, in the West Virginia campaign of 1861. Subsequently General Jackson made him Chief of Engineers, and he served in this capacity until the close of the war, when he resumed his interrupted professional practice.

## ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

WESTERN SOCIETY OF ENGINEERS.
Feb. 1. "Measurement of Discharge of the Niagara River," Clinton B. Stewart. Secy., N. L. Litten, Monadnock Block, Chicago, Ill.

ENGINEERS' CLUB OF ST. LOUIS.
Feb. 1. Secy., E. R. Fish, 2401 N. Spring Ave., St. Louis, Mo.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
Feb. 1. Secy., C. W. Hunt, 220 West 57th St., New York city.

FOUNDRYMEN'S ASSOCIATION OF PHILADELPHIA.
Feb. 1. Secy., Howard Evans, Pier 45, N. Delaware Ave., Philadelphia, Pa.

CHICAGO ELECTRICAL ASSOCIATION.
Feb. 3. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
Feb. 3. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES.
Feb. 3. Illustrated lecture, Prof. M. I. Pupin. Secy., Henry I. Weed, Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.

ENGINEERS' CLUB OF COLUMBUS.
Feb. 4. Secy., H. M. Gates, 12½ North High St., Columbus, O.

ENGINEERS' CLUB OF PHILADELPHIA.
Feb. 4. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

ENGINEERING SOCIETY OF WESTERN NEW YORK.
Feb. 6. Secy., H. J. March, Library Bldg., Buffalo, N.Y.

CIVIL ENGINEERS' SOCIETY OF ST. PAUL.
Feb. 6. Secy., C. L. Annan, City Engineer's Office, St. Paul, Minn.

AMERICAN INSTITUTE OF ARCHITECTS (New York Chapter).
Feb. 8. Secy., Chas. I. Berg, 10 West 23d St., New York city.

NEW ENGLAND WATER-WORKS ASSOCIATION.
Feb. 8. "Filtration, Slow Sand and Mechanical." Secy., J. C. Whitney, Newton, Mass.

FRANKLIN INSTITUTE.
Feb. 8. "Notes on the Reduction of Iron Ores," John M. Hartman; "Ice Caves," Edwin S. Balch. Secy., Wm. H. Wahl, 15 South 7th St., Philadelphia, Pa.

BROOKLYN ENGINEERS' CLUB.
Feb. 9. Secy., A. J. Provost, Jr., 191 Montague St., Brooklyn, N. Y.

CANADIAN SOCIETY OF CIVIL ENGINEERS.
Feb. 9. Secy., H. C. McLeod, 112 Mansfield St., Montreal, Que.

ENGINEERING ASSOCIATION OF THE SOUTH.
Feb. 9. Secy., C. B. Wilson, 100 Broad St., Nashville, Tenn.

WISCONSIN STATE CHEMICAL ASSOCIATION.
Feb. 10. Secy., I. Ladoff, 154 Knapp St., Milwaukee, Wis.

ST. LOUIS RAILWAY CLUB.
Feb. 10. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

MONTANA SOCIETY OF ENGINEERS.
Feb. 11. Helena, Mont. Secy., A. S. Hovey, National Bank Bldg., Helena, Mont.

THE LOUISIANA ENGINEERING SOCIETY.
Feb. 13. Secy., J. F. Coleman, 712 Union St., New Orleans, La.

ENGINEERS' CLUB OF KANSAS CITY.
Feb. 13. Secy., F. W. Tuttle, Baird Bldg., Kansas City, Mo.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
Feb. 14. Secy., Wm. H. Searles, Case Library Building, Cleveland.

DENVER SOCIETY OF CIVIL ENGINEERS.
Feb. 14. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Colo.

NORTHWEST RAILWAY CLUB.
Feb. 14. Secy., T. A. Foque, Soo Line, Minneapolis, Minn.

NEW ENGLAND RAILWAY CLUB.
Feb. 14. Secy., Edw. L. Janes, P.O. Box 1158, Boston, Mass.

NATIONAL SANITARY ASSOCIATION.
Feb. 15. Annual meeting, New York city. Secy., Thos. E. Veal, Atlanta, Ga.

BOSTON SOCIETY OF CIVIL ENGINEERS.
Feb. 15. Secy., S. E. Tinkham, City Hall, Boston, Mass.

WESTERN FOUNDRYMEN'S ASSOCIATION.
Feb. 15. Secy., B. M. Gardner, 1522 Monadnock Block, Chicago, Ill.

NEW YORK RAILROAD CLUB.
Feb. 16. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.

ENGINEERS' CLUB OF CINCINNATI.
Feb. 16. Secy., J. F. Wilson, P. O. Box 333, Cincinnati, O.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
Feb. 16. Secy., F. A. Charpiot, P. O. Box 13, Savannah, Ga.

THE DETROIT ENGINEERING SOCIETY.
Feb. 17. Secy., Henry Goldmark, Wayne Co. Savings Bank Bldg., Detroit, Mich.

ROCHESTER ENGINEERING SOCIETY.
Feb. 17. Secy., John F. Skinner, Reynolds Library Bldg., Rochester, N. Y.

ENGINEERS' AND ARCHITECTS' ASSOCIATION OF SOUTHERN CALIFORNIA.
Feb. 18. Secy., Frank Van Vleck, Currier Block, Los Angeles, Cal.

ASSOCIATION OF ONTARIO LAND SURVEYORS.
Feb. 18. Annual meeting. Secy., A. J. Van Nostrand, Yanger St., Arcade, Toronto, Canada.

ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE.
Feb. 20. "The Nicaragua Canal." Secy., Marshall Morris, 16 Norton Bldg., Louisville, Ky.

TECHNICAL CLUB OF OMAHA.
Feb. 20. Secy., J. Harry Lawrie, Omaha, Neb.

ENGINEERS' CLUB OF MINNEAPOLIS.
Feb. 20. Secy., H. E. Smith, 1620 S. E. 14th St., Minneapolis, Minn.

WESTERN RAILWAY CLUB.
Feb. 21. Secy., F. M. Whyte, 225 Dearborn St., Chicago, Ill.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA
Feb. 21. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburg, Pa.

AMERICAN INSTITUTE OF MINING ENGINEERS.
Feb. 21-25. Annual meeting, New York city. Secy., R. W. Raymond, P. O. box 223, New York city.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS
Feb. 22. Secy., Ralph W. Pope, 26 Cortlandt St., New York city.

AMERICAN INSTITUTE OF MINING ENGINEERS.—The twenty-ninth annual meeting of this Association will be held in New York city, Feb. 21-25.

NORTHWESTERN ELECTRICAL ASSOCIATION.—The seventh annual convention of this Association was held at Milwaukee, Wis., on Jan. 18-19, with about 200 members and visitors present. The list of papers published in our issue of Dec. 29 was presented in full.

ROCHESTER ENGINEERING SOCIETY.—At the meeting of this Society, held on Jan. 20, the paper by Mr. A. J. Grant, entitled "Methods of Construction Adopted in Improvements of the Erie Canal through the Marl Beds of Jordan Level" (Eng. News, Dec. 1, 1898), was continued and discussed.

THE MINNESOTA SURVEYORS' AND ENGINEERS' SOCIETY.—The annual meeting of this society was held at St. Paul, Minn., Jan. 10-12, as noted in our last issue. Officers for the ensuing year were elected as follows: Pres., O. H. Case; Vice-Pres., G. W. Cooley; Secy., Chas. A. Forbes, St. Paul; Treas., Frank H. Nutter.

ENGINEERS' AND ARCHITECTS' ASSOCIATION OF SOUTHERN CALIFORNIA.—The following officers have been elected for the ensuing year: Pres., Fred Eaton; First Vice-Pres., A. B. Benton; Second Vice-Pres., James D. Schuyler; Secy., Frank Van Vleck; Directors: Theodore A. Eisen, J. H. Dockweiler, O. Morgan and Joseph Jacobs.

ENGINEERS' CLUB OF PHILADELPHIA.—The annual meeting of this Club was held Jan. 21. Mr. L. Y. Schermerhorn, the retiring President, read an address, entitled "A Few Phases in the Rise and Development of the Science of Mechanics." Officers for the ensuing year were elected as follows: Pres., Francis Schumann; Vice-Pres., Henry Leffmann; Secy., L. F. Rondinella; Treas., Geo. T. Gwilliam.

WESTERN WATER-WORKS ASSOCIATION.—The second annual meeting of this association was held in Chicago recently, at which officers were elected as follows: President, B. L. Dodge, Cicero Water Co., Illinois; Vice-President, A. F. Callahan, Danville Water Co., Illinois; Secretary, H. E. Keeler, Rogers Park Water Co., Illinois; Treasurer, Thomas R. Lyon, Chicago; Executive Committee, W. G. Maxcy, Oshkosh, Wis.; William B. Bull, Quincy, Ill.; F. A. W. Davis, Indianapolis, Ind.; C. G. Wing, Ludington, Mich; William Molis, Des Moines, Ia.

ENGINEERS SOCIETY OF WESTERN PENNSYLVANIA.—The 19th annual meeting of this society was held at the Society's Home, 410 Penn Ave., Pittsburg, Pa., on Jan. 17, 1899. The following officers were elected: Pres., H. J. Lewis; Vice-Pres., H. W. Fisher; Directors, P. T. Berg, Prof. F. C. Phillips; Secy., R. A. Fessenden; Treas., A. E. Frost. After the adjournment of the annual meeting the regular meeting was called to order. After a discussion as to the stand which should be taken regarding the present agitation for the abatement of the smoke nuisance the society adjourned.

AMERICAN INVENTORS' AND MANUFACTURERS' ASSOCIATION.—The annual meeting of this association was held at Washington, D. C., Jan. 17. The following papers were presented: "The Conditional Nature of Patent Property—The Risks Involved and How to Guard Them," Francis H. Richards, Hartford, Conn.; "Invention as a Primal Factor of Natural Growth," H. M. Boies, Scranton, Pa.; "Patent Laws—The Inventor and The Nation," A. S. Hallidie, San Francisco, Cal.; "The Influence of the Patent System on American Mechanics," John Kirby, Jr., Dayton, O.; "The Nature of Patent Property," R. N. Pratt, Hartford, Conn.

ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE.—At the annual meeting of this club, held Jan. 16, the reports of the President and Secretary showed the Club to be in a healthy condition. The following officers were elected for the ensuing year: Pres., Chas. Hermany; Vice-Pres., Henry Vogt; Secy., Marshall Morris; Directors, W. M. Anderson, J. M. Johnson, Webster Gazlay, C. M. Duke, Pierce Butler, Soren Thurstensen. The regular meeting of the club will be held on the third Monday in each month. The subject for discussion at the February meeting will be "The Nicaragua Canal."

Marshall Morris, Secy.

THE LOUISIANA ENGINEERING SOCIETY.—The regular and annual meeting of this society was held Jan. 14. The reports of the various officers showed the society in a very prosperous condition. The President read his annual address, which historically considered the profession of engineering, including a brief illustrated description of the great engineering works of ancient and modern times. The election of officers resulted as follows: Pres., T. L. Raymond; Vice-Pres., C. H. Chamberlain; Secy., J. F. Coleman; Treas., Alfred F. Theard; Sidney F. Lewis, member of the Board of Managers of the Association of Engineering Societies. Mr. H. J. Maloche, director.

THE IOWA ENGINEERING SOCIETY.—The annual meeting of this society was held at Iowa city, Ia., Jan. 18-19. The following papers were presented: "The Advantage of the Metric System of Weights and Measurements," B. Schreiner; "Photographic Study of Fire Streams," A. Marston; "A Puzzling Problem," Seth Dean; "Methods of Relief Map Construction," F. G. White; "The Limestones of Iowa," Samuel Calvin; "The Uses of Cement," B. Schreiner; "How to Succeed," Peter I. Peterson; "The Fungi of Building Timbers," T. H. MacBride; "Some Experiments Relating to the Standard Methods of Testing Paving Brick," Anson Marston and J. H. Wykoff; "Zoological Engineers," C. C. Nutting; "Methods of Sterilizing and Purifying Water," A. V. Sims; "Methods of Measurement," C. S. Magowan; "The Chemistry of Water," L. W. Andrews; "The Bacteriology of Water," W. L. Bierring; "Advisability of Legislative License for Engineers. Discussion: "Personal Test by Members of the Cement Briquette Machine."

OHIO INSTITUTE OF MINING ENGINEERS.—The winter meeting of this association was held at Columbus, Ohio, from Jan. 18 to 21. The following papers were presented: "Progress and Improvement," J. A. Ede, Spring Valley, Ill.; "The Abuse of Mining Machinery," Lyman D. Howard, Columbus, O.; "Improved Mine Management," Fred. C. Keighley, Uniontown, Pa.; "Domestic Coke and Briquettes from the Retort Coke Oven," R. M. Atwater, Syracuse, N. Y.; "The Cambridge District," Samuel T. Croyle, Byesville, O.; "The Geology of Southeastern Ohio," Prof. J. W. Jones, Gallipolis, O.; "The Story of a Little Piece of Coal," Capt. J. L. Morris, Carrollton, O.; "The Common Branches of Mine Ventilation," Alex. Beattie, Nelsonville, O.; "A Comparison of the Uses of Direct and Alternating Electric Current," Prof. F. C. Caldwell, O. S. U., Columbus, O.; "Long Wall Advancing Compared with Room and Pillar for Seams Below 5 ft. in Thickness," Edward Jones, Ogiesby, Ill. Visits were made to the shops of the Pittsburg, Cleveland & St. Louis Ry. Co., the Chemical Hall of the Ohio State University, and the Columbus Machine Co.

ENGINEERS' CLUB OF ST. LOUIS.—The regular meeting of the club was held on Jan. 18, with 41 members and visitors present. The paper of the evening, entitled "The Southwest Pass of the Mississippi River," was presented by Mr. J. A. Ockerson. The paper was fully described the methods of the last survey, and the physical characteristics of the pass, mentioning especially the character of the banks and the peculiar mud lumps which form at various points. Methods used in making soundings, both in the pass and in the gulf at its mouth, were fully explained. The slope of the river in the pass was stated and the effect of the winds and tides on the slope discussed. The movement of the crest of the bar at the mouth of the pass was described as shown by the surveys of different periods, and the conditions affecting the rate of advance discussed. The most of the silt brought down by the river is deposited before reaching the bar and goes to building up the banks. The plans of the board of engineers appointed to report on the improvement of the S. W. pass were set forth and the nature of the jetties which they proposed was described. E. R. Fish, Secy.

MONTANA SOCIETY OF ENGINEERS.—The 12th annual meeting of this society was held at Helena, Mont., Jan. 12-14, and the program, announced in our issue of Dec. 29, was carried out. The retiring president, Mr. James M. Page, delivered an address, in which he stated that the society had a total membership of 134, composed of 112 active, 18 associate and 4 honorary members. Following an established custom, he reviewed the engineering progress in the state of Montana for the year. This included a brief outline of the work of the Northern Pacific R. R., in revising its grades, filling in pile bridges, ballasting track, improving coaling stations, lining the Big Horn Tunnel with concrete walls and arches, etc. The additional settling basin of the Butte City Water Co. was described. Mention was made of the Madison Canon Dam, and the construction work in progress at that place, and some notes on the Fort Belknap Irrigation system for the Indians of the Fort Belknap Reservation were included. A description of the Montana Power Co.'s dam across the Big Hole River, and some notes on general railway construction concluded the address. Officers for the ensuing year were elected as follows: Pres., Eugene Carroll, Butte; First Vice-Pres., Maurice S. Parker, Butte; Second Vice-Pres., Frank L. Sizer, Helena; Secy., Albert S. Hovey, Helena; Treas., Forrest J. Smith, Helena; Trustees, Finlay McRae, Francis W. Blackford, Edward R. McNeill.

WESTERN RAILWAY CLUB.—At the meeting on Jan. 17, held at the Auditorium, Chicago, Mr. Robert Quayle, C. & N. W. Ry., presented a paper on "Tests of Locomotive Boiler Covering." A request from the Joint Car Inspection Association, at South Amala, to communicate with the Interstate Commerce Commission as to certain methods in handling cars not conforming to the law, and the methods of measuring the height of drawbars by the Commission's inspectors were discussed. No action was taken as the first matter was a detail about which it was unnecessary to trouble the Commission, and the second was a personal matter with the inspector, whose methods the speakers had found to be fair and correct.

At 8.30 p. m. a party of about 100 members left for Hamilton, O., as guests of the Niles Tool Works, of that place. Transportation was provided and four special sleeping cars were attached to the regular train over the Monon Route (C., I. & L. Ry.). At Hamilton, on Wednesday morning, the cars were run to a sidetrack at the works, and the party was left undisturbed until a seasonable hour. Breakfast was served in the new erecting shop, which is at present empty, no tools having yet been put in place. A 30,000-lb. traveling crane is, however, now being erected.

After breakfast, the party was conducted to the shops, and the members were free to spend their time in those shops which interested them most. The 96-ft. lathe, with 45-ft. gap, and the gun shop, was inspected with interest. This lathe, for turning guns, is being built for the Midvale Steel Works, and is a giant among machine tools. In the gun shop were some of the 12-in. built-up rifles for the government. The works have an order for 24 of these guns.

After luncheon, parties were made up to visit the Hamilton-Corliss Engine Works, the Long & Allstatter shearing and punching machine shops, and other points of interest, while one party went down to Cincinnati. From 4 to 5 p. m. a large number of the visitors collected in the foundry to see some of the large castings made.

This ended the technical part of the proceedings, and the party then again assembled in the new erecting shop, where a band furnished entertainment for the rest of the evening. Supper was provided, and there was some speechmaking after its conclusion, during which the thanks of the Western Railway Club were tendered to the officers of the Niles Tool Works for the interesting and enjoyable excursion. About 9 p. m. the party boarded the special cars, which were run as a special train to Indianapolis, and then attached to a regular train, arriving at Chicago at 7.30, Jan. 19.

OHIO SOCIETY OF SURVEYORS AND CIVIL ENGINEERS.—The 20th annual meeting of this society was held at the Palace Hotel, Cincinnati, Ohio, on Jan. 18-20, with an attendance numbering about 90. The following papers were presented: Report of Committee on Land Drainage, J. W. Stump, Circleville; report of Committee on Railroad Engineering, A. W. Jones, Chillicothe; "Awarding Contracts," J. A. Hanlon, Coshocton; report of Committee on Instruments, F. A. Bone, Lebanon; report of Committee on Land Survey, J. D. Varney, Cleveland; "Land Surveying," G. A. McKay, Xenia; "Land Surveying," A. E. Bretz, Lancaster; "Problem in Land Surveying," Geo. H. Hill, Milford; report of Committee on City Engineering, Hosea Paul, Cleveland; "Street Pavements of Sandusky, O," C. A. Judson, Sandusky; "Construction in Alliance During the Past Year," O. W. Prouts, Alliance; "Street Pavements of Lima, O.;" J. C. Crouley, Lima; report of Committee on Bridge Engineering, W. H. Pratt, Chairman, Chicago; report of Committee on Legislation, W. B. Gerrish, Oberlin; report of Committee on Highway Engineering, Jay F. Brown, Cleveland; "Construction and Cost of Roads in Brown Co," C. M. Gordon, Georgetown; "Electric Roads Upon the Highways," G. A. McKay, Xenia; "Inter-Urban Electric Railroads Upon Public Highways," Robert E. Kline, Dayton; report of Committee on Water Supply, J. W. Strawn, Salem; "Water Purification," Homer C. White, Warren; report of Committee on Sanitary Engineering, J. B. Weddell, Mansfield; "Underground Goosetown," H. L. Weber, Richmond, Ind.; report on Sewage Disposal Works at Alliance, O., O. W. Prouts, Alliance; "Pneumatic Caisson Foundation for Main Street Bridge, Chillicothe, O.," A. W. Jones, Chillicothe.

The following officers were elected for the ensuing year: Pres., E. A. Kemmler, Columbus; Vice-Pres., H. C. White, Warren; Secy.-Treas., Prof. C. N. Brown, Columbus. Board of Trustees—J. M. Harper, Cincinnati; J. L. Gilpatrick, Granville; J. D. Varney, Cleveland; J. C. Crouly, Lima, and J. B. Weddell, Mansfield.

## CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

| Bids to be opened. | Work. | Place. | See Eng. News. |
|---|---|---|---|
| Jan. 26. | Deepening river, | Buffalo, N. Y. | Jan. 19 |
| Jan. 26. | Brick, etc., | Washington, D. C. | Dec. 29 |
| | Advertised, Eng. News, Dec. 29 to Jan. 19. | | |
| Jan. 26. | Court house, | Lafayette, Ala. | Jan. 26 |
| Jan. 26. | Pig lead, | St. Louis, Mo. | Jan. 26 |
| Jan. 27. | Steel beams, etc., | St. Louis, Mo. | Jan. 26 |
| Jan. 27. | Electric conduits, | Redlands, Cal. | Jan. 26 |
| Jan. 27. | Valve gates, | Pittsburg, Pa. | Jan. 26 |
| Jan. 27. | Sewers, | Little Falls, N. Y. | Jan. 19 |
| Jan. 28. | Bridge abutment, | Evansville, Ind. | Jan. 19 |
| Jan. 28. | Gas lamps (1,450), | Cleveland, O. | Jan. 5 |
| Jan. 28. | Steam launch, | San Diego, Cal. | Jan. 12 |
| Jan. 28. | Water-works, | New Albany, Ind. | Jan. 12 |
| | Advertised, Engineering News, Jan. 12. | | |
| Jan. 28. | Irrigating canal, | Wormser, Mont. | Jan. 26 |
| Jan. 28. | Bridge piling, | Bay City, Mich. | Jan. 26 |
| Jan. 28. | Laundry machinery, | Lewes, Del. | Jan. 26 |
| Jan. 28. | Electric plants, | Chicago, Ill. | Jan. 26 |
| Jan. 28. | Grading, | Kansas City, Mo. | Jan. 26 |
| Jan. 28. | Lateral pipes, | St. Louis, Mo. | Jan. 26 |
| Jan. 28. | Wells, | Monrovia, Cal. | Jan. 26 |
| Jan. 28. | Water pipe, | Atlanta, Ga. | Jan. 26 |
| Jan. 30. | Electric lights, | Pleasantridge, O. | Jan. 26 |
| Jan. 30. | Police station, | San Francisco, Cal. | Jan. 26 |
| Jan. 30. | Asphalt paving, | New Orleans, La. | Jan. 26 |
| Jan. 30. | Brick paving, | Eau Claire, Wis. | Jan. 26 |
| | Advertised, Engineering News, Jan. 26. | | |
| Jan. 30. | Day beacons (9), | Florida Reefs, Fla. | Jan. 5 |
| | Advertised, Eng. News, Jan. 5 to 26. | | |
| Jan. 30. | Brick paving (11,000 sq.yds.), | Kokomo, Ind. | Jan. 12 |
| Jan. 30. | Water-works, | Baltimore, Md. | Jan. 19 |
| Jan. 30. | Gas lighting, | Laconia, N. H. | Jan. 19 |
| | Advertised, Eng. News, Jan. 19 and 26. | | |
| Jan. 30. | Pipe sewers, | Toledo, O. | Jan. 19 |
| Jan. 30. | Electric lighting, | Laconia, N. H. | Jan. 19 |
| | Advertised, Eng. News, Jan. 19 and 26. | | |
| Jan. 31. | Electric machinery, | London, England | Jan. 19 |
| Jan. 31. | Gas engines (4), | London, England | Jan. 19 |
| Jan. 31. | Wharf, | Fort Barrancas, Fla. | Jan. 12 |
| Jan. 31. | Dry dock, | Boston, Mass. | Dec. 29 |
| Jan. 31. | Heating and ventilating, | Rochester, N. Y. | Jan. 26 |
| Jan. 31. | Macadam road, | Midvale, N. J. | Jan. 26 |
| Feb. 1. | Elevator plant, | Baltimore, Md. | Jan. 26 |
| Feb. 1. | Refrigerating plant, | Manila, Philippines. | Jan. 26 |
| Feb. 1. | Sewers, | Hartford, Conn. | Jan. 26 |
| Feb. 1. | Cement, brick, etc., | Baltimore, Md. | Jan. 26 |
| Feb. 1. | Transportation, | Manila, Philippine Islands. | Jan. 26 |
| Feb. 1. | Substructure of canal pier, | Duluth, Minn. | Jan. 5 |
| | Advertised, Eng. News, Jan. 5 to 26. | | |
| Feb. 1. | Library building, | Owatonna, Minn. | Jan. 5 |
| Feb. 1. | Electric light plant, | Richmond, Va. | Jan. 5 |
| Feb. 1. | Electric light plant, | Menahga, Minn. | Dec. 29 |
| Feb. 1. | School building, | Peoria, Ill. | Dec. 1 |
| Feb. 1. | Wharves and dredging, | Honolulu, H. I. | Jan. 12 |
| Feb. 1. | Macadamizing, | Fayetteville, Ark. | Jan. 12 |
| Feb. 1. | Jail building, | Augusta, Mont. | Jan. 19 |
| Feb. 1. | Gun forgings, | Washington, D. C. | Jan. 19 |
| Feb. 1. | Paving and curbing, | Jamestown, N. Y. | Jan. 19 |

Feb. 1. Street bonds, Shreveport, La.....Jan. 19
Feb. 1. Street and building bonds, Appleton, Wis. Jan. 19
Feb. 2. Steel bridge, Helena, Mont. .....Jan. 19
Feb. 2. Graveling, Memphis, Tenn. .....Jan. 19
Feb. 2. Electric lighting, New Orleans, La.....Nov. 3
Feb. 2. Red cedar wood, New York, N. Y.....Jan. 26
Feb. 2. Bridge, Brooklyn, N. Y. .....Jan. 26
Feb. 2. Bridge, Ogden, Utah. .....Jan. 26
Feb. 2. School building, New York, N. Y.....Jan. 26
Feb. 2. Hospital buildings, St. Louis, Mo.....Jan. 26
Feb. 3. Power house, Grand Rapids, Mich.....Jan. 26
Feb. 3. Sewer pipe (10 miles), Spartanburg, S. C...Jan. 12
Advertised, Eng. News, Jan. 12 and 19.
Feb. 3. Pipe sewers, Spartanburg, S. C. .....Jan. 12
Advertised, Eng. News, Jan. 12 and 19.
Feb. 3. Dredging canals, Keweenaw Point, Mich. Jan. 5
Advertised, Eng. News, Jan. 5 to 26.
Feb. 4. Heating and ventilating, Cleveland, O. ....Jan. 19
Feb. 5. Heating and ventilating, Burlington, Vt. Jan. 19
Feb. 6. Brick paving, Toledo, O. .....Jan. 12
Feb. 6. Electric lighting, Johnstown, N. Y. .....Jan. 19
Feb. 6. Brick sewers, Ottawa, Ont.....Jan. 19
Feb. 6. Church building, Fresno, Cal. .....Jan. 19
Feb. 6. Steel bridge, De Soto, Mo. .....Jan. 19
Feb. 6. Macadam roads (2), Vevay, Ind.....Jan. 19
Feb. 6. Curbing and cut stone, Burlington, Vt.....Jan. 26
Feb. 6. Alterations, etc., for hospital, New York. Jan. 26
Feb. 6. Macadamizing, Plainfield, N. J. .....Jan. 26
Feb. 6. Curbing, etc., Atlanta, Ga. .....Jan. 26
Feb. 6. Electric plant, Hull, Que. .....Jan. 26
Advertised, Eng. News, Jan. 26 and Feb. 2.
Feb. 6. Brick paving, etc., Albany, N. Y.....Jan. 26
Feb. 6. Water pipe, castings, etc., St. Louis, Mo. Jan. 26
Feb. 7. Sewer materials, Atlanta, Ga. .....Jan. 26
Feb. 7. Laying water-pipe, etc., St. Louis, Mo. ...Jan. 26
Feb. 7. Road, Placerville, Cal. .....Jan. 19
Feb. 7. Electric plant, Woodsfield O.....Jan. 19
Feb. 7. Water bonds, Columbus, Miss. .....Jan. 19
Feb. 7. Sale of canal, Annapolis, Md. .....Dec. 1
Feb. 8. Road work (29½ miles), Rockville, Ind....Jan. 19
Feb. 8. Bridge work, Rutland, Vt. .....Jan. 26
Advertised, Eng. News, Jan. 19 to Feb. 2.
Feb. 8. Railway (50 miles), Burlington, Vt.....Jan. 26
Advertised, Eng. News, Jan. 19 to Feb. 2.
Feb. 8. Sewer pipe (13 miles), Steelton, Pa. .....Jan. 26
Advertised, Eng. News, Jan. 26 and Feb. 2.
Feb. 8. Rock lime, New York, N. Y. .....Jan. 26
Feb. 8. Bridge work for 1899, Nebraska City, Neb. Jan. 26
Feb. 9. Brick sewers, Stockton, N. J. .....Jan. 26
Feb. 9. Electric plant, Thibodeaux, La. .....Jan. 26
Feb. 9. Gas franchise, Exeter, Cal. .....Jan. 26
Feb. 10. Electric lighting, York, Pa. .....Jan. 19
Feb. 10. Jail building, Keyser, W. Va.....Sept. 20
Feb. 11. Wooden bridges, York, Neb. .....Jan. 19
Feb. 11. School building, Cleveland, O. .....Jan. 26
Feb. 13. Steel hull, New Orleans, La. .....Jan. 19
Advertised, Eng. News, Jan. 19 to Feb. 2.
Feb. 13. Crane boat, Charleston, W. Va.....Jan. 19
Feb. 13. Water bonds, Reno, Nev.....Dec. 22
Feb. 13. Court house, Rock Springs, Tex. .....Jan. 12
Feb. 13. Gasoline gas plant, Osage, Okla.....Jan. 26
Feb. 14. Brick paving, etc., St. Louis, Mo.....Jan. 19
Feb. 15. Irrigation canal, Albuquerque, N. Mex...Jan. 19
Advertised, Eng. News, Jan. 19 to Feb. 2.
Feb. 15. Brick paving, etc., Cleveland, O. .....Jan. 26
Feb. 16. Boat house and armory, Annapolis, Md...Jan. 26
Feb. 16. Pier superstructure, etc., Duluth, Minn. ..Jan. 19
Feb. 16. Court house, Buckhannon, W. Va.....Jan. 19
Feb. 16. Swing bridges (2), Alexandria, Egypt.....Jan. 19
Feb. 16. Electric installation, Fort Point, Tex.....Jan. 19
Advertised, Eng. News, Jan. 19 to Feb. 16.
Feb. 16. School building, Ellendale, N. Dak.....Jan. 12
Feb. 16. Macadamizing, Decatur, Ind. .....Jan. 12
Feb. 18. Water-works, Spring Lake, N. J.....Jan. 26
Advertised, Eng. News, Jan. 26 and Feb. 2.
Feb. 20. Water-works, Elkhart Lake, Wis.....Jan. 26
Feb. 20. Lift bridge near Taylor St., Chicago, Ill..Dec. 29
Advertised, Engineering News, Dec. 29.
Feb. 20. Stone heads, Newark, N. J. .....Jan. 19
Advertised, Eng. News, Jan. 19 to Feb. 9.
Feb. 20. Buoys, etc., Tompkinsville (S.I.), N. Y....Jan. 19
Advertised, Eng. News, Jan. 19 and 26.
Feb. 21. Pumping plant, Honolulu, H. I. .....Jan. 12
Advertised, Eng. News, Jan. 12 and 19.
Feb. 21. Cement and stone, Tybee Island, Ga. .....Jan. 26
Advertised, Eng. News, Jan. 26 to Feb. 9.
Feb. 22. Brick paving (17 blocks), Bedford, Ind. ...Jan. 26
Feb. 22. Jail building, Alexandria, La. .....Jan. 19
Feb. 25. Court house, Douglass, Ga.....Dec. 29
Feb. 25. Street work, Cincinnati, O. .....Jan. 26
Feb. 26. Porcelain insulators, Christiania, Norway..Jan. 19
Feb. 28. Dust-cart designs, London, England.....Jan. 5
Mar. 1. Court house, Arkadelphia, Ark.....Jan. 5
Mar. 1. Railway and highway bridge, Quebec, Que. Jan. 12
Advertised, Eng. News, Sept. 29 and Oct. 6.
Mar. 1. Water-works, Oto, Ia. .....Jan. 19
Mar. 1. Electric lighting, Spartanburg, S. C.....Jan. 26
Mar. 12. Electric light plant, Manlius, N. Y.....Jan. 12
Mar. 15. Purchase of water-works, Belem, Brazil...Dec. 1
Mar. 15. Electric r'y (23 miles), Shanghai, China...Nov. 24
Advertised, Eng. News, Nov. 17 to Dec. 8.
Mar. 15. Bridges (3), Joliet, Ill. .....Jan. 19
Advertised, Engineering News, Jan. 19.
Mar. 15. Court house plans, Wilkesbarre, Pa.....Jan. 26
Mar. 27. Court house plans, Leesville, La. .....Jan. 26
Mar. 31. Telephone concessions, Shanghai, China..Nov. 24
Advertised, Eng. News, Nov. 17 to Dec. 8.
Apr. 1. Viaduct substructure, St. Joseph, Mo. .....Jan. 5
Apr. 1. Opera house, Columbus, Ga. .....Jan. 19
Apr. 14. Hall building, Bradford, England.....Jan. 19

## RAILWAYS.

BOONE COUNTY.—This company has been incorporated in Iowa, with a capital stock of $1,500,000, to operate a line from a point on the Chicago & Northwestern Ry., near Boone, Ia., westerly to another connection with the Chicago & Northwestern. Charles B. Lowe and H. V. Ferguson, Cedar Rapids, Ia., are interested.

CENTRAL NEW ENGLAND.—C. H. Ewing, Ch. Engr., Hartford, Conn., informs us that the surveys have been completed and the right of way secured for the proposed extension from Tariffville, Conn., to Springfield, Mass., 15 miles. Capital for construction is forthcoming, and contracts will soon be let. This company is a reorganization of the Philadelphia, Reading & New England R. R. Co. John W. Brock, Pres., Philadelphia, Pa.

CHESTNUT RIDGE.—Reports state that grading is in progress on this proposed line from Lehigh Gap to Kunkletown, Pa., via Millport and Little Gap, 15 miles, which is proposed to open up 6,000 acres of clay soil. Operation is expected to commence about May 1. James Pearsol, Pres.; W. Booth, Ch. Engr., both of Kunkletown.

CHICAGO, MILWAUKEE & ST. PAUL.—The Des Moines, Northern & Western branch of this system will probably be extended from Fonda to Spencer, Ia., about 40 miles, according to reports. An old grade made by the Wabash R. R. Co., eighteen years ago, lies between these cities. W. G. Collins, Gen. Mgr., Chicago; J. F. Gibson, Supt., Marion, Ia.

DUCHESNE.—This company was incorporated in Utah, Jan. 9, with a capital stock of $765,000, or $15,000 a mile, to construct a railway from the Rio Grande Western main line, near Colton, to the junction of Strawberry Creek and Duchesne River, a distance of 52 miles. The incorporators are: William F. Colton, Treas. of the Rio Grande Western; Charles W. Bennett, Robert Harkness, William M. Bradley, A. U. Howard, E. A. Greenwood and Andrew Howat, all of Salt Lake City, Utah.

DULUTH, MISSISSIPPI RIVER & NORTHERN.—I. N. Gray, Ch. Engr., Swan River, Minn., informs us that a preliminary line has been run for an extension from Sturgeon to Sturgeon Lake, a distance of ten miles, and estimates made of the cost. Nothing more will be done on this until the summer, when a location will be made and perhaps construction begun. A. W. Wright, Pres., Saginaw, Mich.

EL PASO & NORTHEASTERN.—We are informed that George S. Good & Co., Lock Haven, Pa., have secured the contract for the extension of this railway from Alamogordo to the Salado coal fields, in New Mexico, a distance of 92 miles; work to commence at once. C. B. Eddy, Pres.; H. A. Sumner, Ch. Engr., of El Paso, Tex.

HARRISBURG & SOUTHERN.—This company was incorporated in Illinois, Jan. 15, with a capital stock of $250,000, by S. F. Crews, R. Crews, A. D. Percy, A. T. Welles, Chicago; S. S. Barger, Eddyville. The new line, according to Mr. Barger, will consist of two lines, for which the right of way has already been surveyed. One, about 40 miles in length, will start at Galatia on the St. Louis, Alton & Terre Haute, and extend southward through Harrisburg and Wolrab Mills to Elizabethtown, Ill. The other line, some 20 miles in length, will start at Harrisburg, which is on the "Big Four," and run west to or near Marion, in Williamson county, where it will connect with the Alton, Paducah & Memphis.

IAEGER & SOUTHERN.—We are informed that this proposed line has been located from Iaeger through Peeryville, W. Va., to Jacobs Fork of Dry Fork of Tug River, a distance of 26 miles. Walton & Luck, Pallsmill, W. Va., have been awarded the contract for constructing about five miles of the road, which is to be of standard gage. Construction work has just been commenced and is to be completed by April 1. Wm. M. Ritter, Pres.; Wm. D. Janney, Ch. Engr., both of Welch, W. Va.

JEFFERSON CITY, FORT SCOTT & SOUTHWESTERN.—This company has been incorporated in Kansas with a capital stock of $4,000,000, to construct and operate a standard gage railway from Jefferson City, Mo., via Fort Scott to the southern line of Kansas, about 300 miles. The directors are: Reuben L. Dewey, St. Albans, Vt.; John E. Frost and E. F. Ware, Topeka; Wm. C. Gunn, Fort Scott, Kan.; L. A. Begger, Hutchinson, Kan.

KEOKUK & WESTERN.—The Keokuk Construction Co. has been awarded the contract for building an extension of this line from Cainsville to Pattonsburg, Mo., 32 miles. Work is expected to begin in the spring. A. C. Goodrich, Gen. Mgr., Keokuk, Ia.

LAUREL & NORTHWESTERN.—Arthur J. Cox, Ch. Engr., Iowa City, Ia., informs us that the proposed route for this line is from Laurel, Miss., northwest through Jones, Smith, Simpson and Covington counties, 50 miles. The preliminary survey has been made for 20 miles, the right of way obtained for 15 miles, of which 12 miles have been located. A party has just started to complete the preliminary surveys and to locate about 30 miles beyond Laurel. The work is being done by Eastman, Gardiner & Co., Laurel, using a 60-lb. rail. The line will be built by the fall to Leaf River, 20 miles from Laurel. S. W. Gardiner, Ch. Engr., Laurel, Miss.

MANKATO & NEW ULM.—This company was incorporated in Minnesota, Jan. 14, with a capital stock of $50,000, to build a cut-off from New Ulm to Mankato, Minn., about 24 miles. The officers are: Marvin Hughitt, Pres.; M. M. Kirkman, Vice-Pres. and Treas.; J. B. Redfield, Secy., all of whom are officials of the Chicago & Northwestern Ry. Co.

MARSHALLTOWN & DAKOTA.—It is announced that this company proposes to build a line this summer from Story City west to Fraser, Ia., thence across the Des Moines River to Gowrie, where the Northwestern road is crossed by the Rock Island, 26 miles. This is said to be practically an extension of the Iowa Central branch running from Marshalltown to Story City. The Boone Valley Coal & R. R. Co. has sold all the right of way and roadbed from Fraser to Fraser Junction. Hamilton Browne, Boone, Ia., is said to be interested.

MASSACHUSETTS.—Compromise plans are said to have been accepted by Engineer Allen of the commission, Engineer Curtis for the Consolidated road, and City Engineer Borden for the abolition of grade crossings within the city limits of Fall River, Mass.; estimated to cost $1,500,000.

MEXICO.—Press reports state that President Porfiro Diaz has approved the concession granted to Mariano Gallardo and Anacarsis Peralto for the construction of two lines of railway in the States of Tabasco and Chiapas. One line will start from Pichucalco and terminate at the Blanquillo River, while the other will run from Teapa to a point on the Blanquillo River; both will pass through sections of Mexico now but little developed. Under the terms of the concession work must be completed within three years.

MEXICO.—We are informed that Gen. Mena, Minister of Communications, has approved the concession given to Manuel Arrigunaga for the construction of a railway in the State of Yucatan, from Merida to Bolonchenticul.

MORGANTOWN & KINGWOOD.—This company was incorporated in West Virginia, Jan. 15, with a capital stock of $200,000, to construct a railway between Morgantown and Kingwood, W. Va. The incorporators are: D. H. Cowing, Syracuse, N. Y.; George C. Sturgis and J. A. M. Martin, Morgantown; George M. Whitecures and Thomas E. Davis, of Grafton, W. Va.

PENSACOLA & NORTHWESTERN.—S. N. Van Praag, Pres., Pensacola, Fla., informs us that the route for this proposed railway is from Dempolis to Eutaw, Ala., 440 miles. Three surveys have been made for the first 220 miles, or from Pensacola, as far as Eutaw, on the Alabama Great Southern, now part of the Southern Ry. The capital has been secured and contracts let for the construction of the first 220 miles. It is expected to start grading at an early date. Reports state that O'Brien, Sheehan & McBean, contractors, of New York, are interested.

PHILADELPHIA & READING.—It is announced that this company has decided to reseel its line, between West Milton, Pa., and East Mahanoy Junction, on the Catawissa division, with 90-lb. rails. This division is used almost exclusively for shipping coal over the mountain, and the 75-lb. rails now used are found to be too light for carrying the 108-ton engines used by the company in this traffic. The company is also erecting in the yards at Catawissa the largest coal dock, water tank and turntable on its entire system. H. K. Nichols, Ch. Engr., Philadelphia, Pa.

RUTLAND CANADIAN.—Bids are asked until Feb. 8, postponement from Jan 31, for about 50 miles of railway work on this new line from Burlington, Vt., north, as stated in our advertising columns. John W. Burke, Ch. Engr., 45 Broadway, New York.

SEABOARD & GULF.—This company has been organized by George M. Brinson, Stillmore, Ga.; George Ketchum, Macon, Ga., and others, with $1,000,000 capital stock, according to reports, to build a railway from Anderson, S. C., through Elbert county, Ga., to Carrabelle, Fla., about 450 miles.

SOUTHERN INDIANA.—This line is expected to be extended soon from Greensburg to Richmond, Ind., 52 miles. It is also said that steel has been bought for an extension from Elnora, Davies county, to Terre Haute, 42 miles. When both extensions are completed the line will be over 200 miles long, and will pierce the heart of the Indiana coal and stone fields. John R. Walsh, Pres., 185 Dearborn St., Chicago, Ill.

SPARKS, MOULTRIE & GULF.—This line is reported to be about to be extended and improved near Moultrie, Ga. The line at present includes about 34 miles of track between Sparks and Moultrie. M. F. Amorous, Gen. Supt., Sparks, Ga.

SUMTER & WATEREE.—Oliver & Walker, Langley, S. C., we are informed, have secured a contract for the construction of this line from Sumter to Middleton, 15 miles; work to begin soon. Several bridges will be built. J. D. Blanding, Pres., Sumter, S. C.; C. S. Phelps, Ch. Engr., Charleston, S. C.

ULSTER & DELAWARE.—This line, it is stated, will be extended from Bloomville to Oneonta, N. Y., on the Delaware & Hudson R. R., about 18 miles, at a cost of about $35,000. E. Coykendall, Gen. Supt., Rondout, N. Y.

VINING & COLEMAN.—Will L. Vining, Pres., Austin, Tex., informs us that all the surveys have been completed and the right of way secured for this proposed line from Overall Junction to Vining, about 22 miles. Contracts for construction may be let March 10. J. W. Maxcy, Ch. Engr., Houston, Tex.

WATERVILLE & WISCASSET.—Chas. H. Cooke, Ch. Engr. of Richmond & Potomac Construction Co., Waterville, Me., and 55 Broadway, New York, has informed us that the contract which his company expected to award on Jan. 20 for work on this railway is for 16 miles of narrow-gage line requiring about 120,000 cu. yds. of earth and 10,000 cu. yds. of rock excavation and a 900-ft. deck bridge over the Kennebec River at Waterville. A copy of the specifications may be seen at the office of the Engineering News, St. Paul Bldg., New York.

WATONWAN VALLEY.—This company was incorporated in Minnesota, Jan. 17, with a capital stock of $50,000. The incorporators are: W. A. Scott, T. Wilson, J. T. Clark, J. C. Stuart, L. A. Robinson, St. Paul, Minn., all officials of the Chicago, St. Paul, Minneapolis & Omaha Ry. Co. Principal office, Madelia, Minn.

## STREET AND ELECTRIC RAILWAYS.

LACONIA, N. H.—The directors of the Laconia St. Ry. Co. have voted to extend its lines from the present terminus at Lakeport to The Weirs bridge in Ward 1; work to begin this spring. H. L. Pierce, Pres., Leominster, Mass.; L. S. Pierce, Supt.

MEREDITH, N. H.—A bill has been introduced into the state legislature to incorporate the Meredith & Ossipee Electric Ry. Co.

PALMER, MASS.—The Palmer & Monson Electric Ry. Co. has voted to issue $60,000 in bonds for the extension of its line to Monson, Ware and West Warren, and to increase its capital stock from $35,000 to $90,000.

NORWALK, CONN.—It is reported that the Norwalk Tramway Co. has completed plans for a new storage station and extensions for its system to be made in the spring. T. M. Waller, Pres.; W. R. Thompson, Ch. Engr., 40 South Main St., South Norwalk.

AUBURN, N. Y.—The Appellate Division of the Supreme Court has denied the application of the Auburn & Western Ry. Co. for a certificate which will permit it to build an electric railway from Auburn to Cayuga.

BUFFALO, N. Y.—M. L. Upson, Gen. Mgr., 1005 Ellicott Square, Buffalo, informs us that surveys and complete plans have been made for the proposed Buffalo, Hamburg & Aurora Ry., from East Aurora to Hamburg, via Orchard Park, 21 miles, and that a certificate from the railroad commissioners has been obtained. The rights of way have all been obtained, but the bonds have not yet been disposed of. About 50 carloads of material are on the ground. A. J. Bensing, Pres., Ellicott Square, Buffalo.

GREENWICH, N. Y.—A hearing will be given in this village Jan. 27 to consider the application of the Greenwich & Schuylerville Electric Ry. for a franchise. J. A. Powers, Secy., Lansingburgh, N. Y., has said that there is no immediate prospects of awarding contracts, as reported, for constructing this seven miles of proposed railway.

NEW PALTZ, N. Y.—Edward Browne is stated to have been appointed permanent receiver for the New Paltz & Walkill Valley R. R. Co., which owns a street railway extending from Highland to New Paltz. Jas. G. Graham, of Newburg, N. Y., has been the temporary receiver.

NYACK, N. Y.—The stockholders of the Nyack Traction Co. have decided to increase its capital stock from $75,000 to $100,000. Work on the power house will probably begin soon. Track-laying has been suspended until spring. Isaac A. Walker & Son, General Contractors, Stephen Girard Bldg., Philadelphia, Pa.

PERTH AMBOY, N. J.—The Perth Amboy R. R. Co., incorporated by the Lewisohn Bros., owners of the Raritan Copper Works, and by J. C. McCoy, has been granted a franchise to build a trolley line in this place with extensions to Metuchen, Keasby and Woodbridge.

KITTANNING, PA.—The Altoona Electric Engineering & Supply Co., of Altoona, Pa., we are informed, has been awarded the contract for constructing the proposed Kittanning & Ford City St. Ry., from Nealton through Kittanning to Ford City and Rosston, five miles. About two miles are ready for rails, and it is expected to have three miles in operation within 60 days. Frank A. Moesta, Pres.; A. B. Norton, Ch. Engr., both of Kittanning.

MYERSVILLE, MD.—Douglass Bros., Millerstown, Pa., the contractors who built the Catoctin & Myersville Electric Ry., which connects with the Frederick and Middletown road at the latter place, it is said, are contemplating the organization of a stock company to continue the line to Hagerstown, about 12½ miles, thereby giving a continuous electric system from Frederick to Hagerstown, about 26 miles. A preliminary survey to ascertain the probable cost will probably be made in a few weeks.

ADRIAN, O.—It is announced that all of the right of way has been obtained for the proposed electric line between Adrian and Toledo, and that construction work will begin April 1 and be completed July 1. C. T. Wheeley, of Adrian, is interested.

HAMILTON, O.—H. L. Weber, Cy. Engr. of Richmond, Ind., is said to have been chosen chief engineer of the proposed electric railway from Hamilton to Richmond, via Darrtown, Morning Sun, and Fair Haven, 36 miles. Arrangements have been completed for securing the right of way and making surveys.

SPRINGFIELD, O.—The Springfield Ry. Co. was granted a franchise Jan. 17 to extend its lines to the Pythian and Oddfellows' homes and to Snyder Park. Work will begin soon. W. B. McKinley, Pres., 18 Bookwalter St.

ANGOLA, IND.—The Northeastern Indiana St.Ry. Co.,of Angola, was incorporated Jan. 13 with a capital stock of $50,000. It is proposed to construct a street railway in the spring from Orland to Angola and Waterloo, via Pleasant Lake, Ashley and Hudson. The stockholders are: Stephen A. Powers, Dr. J. A. Waller and Solomon A. Wood, of Angola; John F. Shuman, of Waterloo.

EVANSVILLE, IND.—Reports state that R. L. Worrell, W. L. Carter and W. C. Henning, of Dayton, O., are actively promoting the building of an electric line from Evansville to Rockport, Cannelton and Tell City, a distance of 40 miles. It is expected to begin construction by May 1; estimated cost, $250,000.

FRANKFORT, IND.—The Clinton Traction Co. of Frankfort, Clinton county, has been incorporated with a capital stock of $25,000.

GREENFIELD, IND.—It is reported that the council has granted to Wm. C. Dudding, F. G. Banker and a company of local capitalists a 30-year franchise in this city for the construction of an electric line from here to Indianapolis. The company has all the right of way with the exception of the streets of Indianapolis, and work on the proposed line is expected to begin in the early spring. The company has secured the necessary capital.

HARTFORD CITY, IND.—A. J. Applegate, Perkinsville, Ind., informs us that no surveys have yet been made for the proposed electric line between this city and Noblesville, but that an organization is being effected. No capital has yet been secured for construction.

RICHMOND, IND.—Reports state that the Richmond Traction Co. has decided to increase its capital stock from $300,000 to $600,000, and to bid on the franchise of the Main St. car line now operated by the Richmond Ry. & Electric Co. S. W. Fordyce, Trustee.

SOUTH BEND, IND.—The South Bend & Elkhart Ry. Co. has been granted a franchise by the county commissioners to build through St. Joseph county. A 56-lb. rail will be used. Arthur Kennedy, Pres.; Dewitt Dilworth, Secy., of Pittsburg.

ALTON, ILL.—The Alton & East Alton Ry. & Power Co. has been incorporated in Illinois with a capital stock of $100,000, to construct new lines for the Alton Ry. & Illuminating Co. The incorporators are: O. S. Stowell, G. M. Ryrie and Henry S. Baker. J. F. Porter, Pres., Alton.

CHICAGO, ILL.—The Metropolitan West Side Elevated Ry. Co. was incorporated Jan. 17 with a capital stock of $16,500,000, to build and operate an elevated railway in Chicago, and the towns of Cicero, Proviso, Lawndale, Leyden. The incorporators are: Dickinson MacAllister, William E. Baker, William W. Gurley, Ira C. Wood, Will M. Clark, Hiram L. Keck, Addison L. Gardner.

KENOSHA, WIS.—The Milwaukee, Racine & Kenosha Ry. Co. has again petitioned the council for a franchise to build into Kenosha. Matthew Slush, Pres., Racine, Wis.

SPIRIT LAKE, IA.—Bids will be received about Feb. 10 for material and equipment for seven miles of electric railway for the Spirit & Okoboji Lakes Rapid Transit Co. W. F. Ryan, Engr., Peoria, Ill.

STILLWATER, MINN.—The Twin City Rapid Transit Co. has applied to the council for a franchise to build a street railway in this city, being a proposed extension of present line between St. Paul and Wildwood. Thomas Lowry, Pres., Minneapolis, Minn.

NIOBRARA, NEB.—L. B. Rowe has applied to the council, according to reports, for a franchise to build an electric line in Niobrara.

BOULDER, COLO.—It is reported that Boston capitalists, represented by W. A. McMansur and W. E. Reed, have filed a deposit of $10,000 with the city clerk as a guarantee to build an electric road through Boulder, and also to the Chautauqua grounds in the suburbs. They promise to invest immediately $100,000 and to put in a temporary generating station, which will afterward be held as an emergency when the immense power transmission plant in the coal region, six miles distant, opens. The latter will also supply gold mines in a rich section with power from waste coal, which can be put under the boilers for less than fifty cents a ton.

## ELECTRIC LIGHT AND POWER.

EASTPORT, ME.—The property of the Eastport Electric Lighting Co. has been purchased by Chas. E. Capen, of Eastport. It is said that a number of improvements are to be made to the plant.

WELLESLEY, MASS.—A committee has been appointed to ask the legislature to grant this town authority to build a municipal plant.

EAST HAMPTON (L. I.), N. Y.—The question of having electric lights in connection with the water-works to be built by the Home Water Co. is being considered.

GLENS FALLS, N. Y.—Local papers state that a company is being organized to build a power plant about seven miles below Palmer, which it is proposed to have furnish about 10,000 HP. The Kanes Falls Electric Co., the International Paper Co. and Daniel R. Leavens are interested. Chas. E. Parsons, Engr.

HEMPSTEAD (L. I.), N. Y.—The question of this village issuing $50,000 in 4% bonds for a plant and water-works is being considered. Francis Bull, Town Clk.

NIAGARA FALLS, N. Y.—Press reports state that John Birkenbine, Elec. Engr. and Pres. Franklin Institute, Philadelphia, Pa., is preparing plans for a power plant to be built at the Whirlpool Rapids, Niagara River. A company is being organized to build the plant, which it is proposed to have furnish 35,000 HP. The estimated cost is $2,000,000. A canal will be built inside the tracks of the Gorge Electric Ry. under the cliff. Geo. A. Ricker, Engr., 702 Ellicott Square, Buffalo; Capt. John M. Brinker, Pres. Gorge Electric Ry. Co., and Herbert P. Bissell are interested. We are informed that the preliminary plans have been submitted to the parties interested. When accepted or modified, the details will be prepared. Until this is done no time for receiving bids can be indicated.

PENN YAN, N. Y.—The plant at Seneca Mills belonging to the Penn Yan Electric Light & Power Co. will be improved.

ROCHESTER, N. Y.—The supervisors have voted to build an electric plant for the Monroe county penitentiary to cost about $2,000. Supervisors James Clark and Wm. Thompson may be addressed.

ROCHESTER, N. Y.—W. H. Vorce, Supt. Signal Service, N. Y. C. & H. R. R. R. Co., has completed plans for a plant to light a number of railway buildings in this city.

MALVERN, PA.—A company has been organized to build a plant at a cost of about $12,000 to light this place, Paoli, etc.

WEST NEWTON, PA.—At the February election this place will vote on the question of issuing $16,413 of 6% bonds, part of which will be used for enlarging the plant.

WILMINGTON, DEL.—W. J. Wiley, Secy. Street and Sewer Board, writes us that no steps have been taken towards building a municipal plant as was recently reported.

BEDFORD CITY, VA.—The council has decided to negotiate with John D. Langhorne, of Washington, D. C., for the purchase of the plant owned by him. The plant cost $25,000, but the machinery is old and it will cost considerable to replace it. The city offers to pay $3,500 for the plant.

INDIAN HEAD, FORT MONROE, VA.—The Westinghouse Electric & Mfg. Co., Pittsburg, Pa., has been awarded the contract by the government for furnishing electrical machinery to be installed at the Indian Head proving grounds. The order includes two alternating and direct current generators of 366 HP. each, one alternating current generator of 100 HP., three Westinghouse steam engines, to operate 300 HP., 13 motors, with an aggregate capacity of 155 HP., and three Westinghouse electric locomotives.

RICHMOND, VA.—A company has applied for a charter to build a conduit system for electric wires in this city. Capt. John H. Frischkorn, Pres. Bd. Fire Comrs.

RAYMOND CITY, W. VA.—The Devere Electric Co., 430 Plum St., Cincinnati, O., has been awarded the contract for furnishing the machinery for a plant for this place.

SPARTANBURG, S. C.—Bids are asked until March 1 for furnishing 100 or more 2,000-c. p. arc lights for a term of five or ten years, also for a number of private and commercial lights. A. B. Calvert, Mayor.

LAKE PROVIDENCE, LA.—This city has voted to issue $17,500 in bonds for a plant and water-works.

THIBODEAUX, LA.—Bids are asked until Feb. 9 for the purchase of machinery, etc., for the proposed plant. R. G. Naguin, Cy. Marshal; G. N. Borde, Engr., Liverpool & London & Globe Bldg., New Orleans.

MADISONVILLE, KY.—We are informed that the Reinecke Coal Co. will want for its proposed electric and haulage plant four 150-HP. boilers and complete electric equipment to haul the coal out of the mines, six electric coal cutting machines, two electric locomotives and an engine, dynamo, etc.

BLOOMVILLE, O.—An election will be held Jan. 30 to vote on the question of issuing $8,000 in bonds for a plant. J. F. Walker, Mayor.

LIMA, O.—Chas. Curry, Gen. Mgr. Lima St. Ry. Co., writes us that a power and light station is to be erected by the company. The building will be 60 × 100 ft. and there will be required the necessary boilers, engines, dynamos, etc. Leech & Leech, Archs, Lima.

PLEASANT RIDGE, O.—Bids are asked until Jan. 30 for furnishing electric lights. J. B. Hayden, Clk.

RAVENNA, O.—Waldo D. Webster and Glenn C. Webster have applied for a franchise to operate a plant in this town.

TOLEDO, O.—The Home Heating & Lighting Co. has decided to build a new plant at a cost of about $50,000. H. T. Yanyan, Supt. and Mgr.

EVANSVILLE, IND.—The council is reported to have voted to build a municipal plant at a cost of about $75,000.

WINCHESTER, IND.—S. D. Fox, Cy. Clk., writes us that the time for letting the contract for building a plant and water-works has been postponed. Daniel W. Mead, Wm. Brown Bldg., Rockford, Ill., has been engaged to prepare plans and specifications for the plants.

GRAND RAPIDS, MICH.—Bids are asked by the board of public works until Feb. 3 for constructing the superstructure for the proposed plant. President Johnson, Bd. Pub. Wks., may be addressed. Nagle & Ball, Engrs., Chicago.

SCHOOLCRAFT, MICH.—Another election will soon be held to vote on the question of issuing bonds for a plant. If the proposition is again defeated it is proposed to grant a franchise.

ALTON, ILL.—J. F. Porter, Pres., it is understood, is preparing plans for a heating plant, street railway, etc., to cost about $200,000, for the Alton Ry. & Illuminating Co.

CHICAGO, ILL.—Bids are asked until 11 a. m., Jan. 28, for erecting plants at the pumping stations at Springfield Ave. and at Central Park Ave. L. E. McGann, Comr. Pub. Wks.

CHICAGO, ILL.—We are informed that nearly all the contracts are let for a plant for Armour & Co., to be operated by steam. J. E. Smith, Mech. Engr., Motive Power Dept.; C. F. Hall, Civil Engr. and Arch.

MOWEAQUA, ILL.—J. H. Culver, of Decatur, has been granted a franchise. It is stated that part of the machinery has already been purchased. The plant is to be in operation by April 1.

WARREN, ILL.—It is reported that this place will soon build a plant.

TOPEKA, KAN.—The Topeka Commercial Club is considering the question of asking the state to build a power plant to furnish light, heat and power for the insane asylum, state capitol, etc.; estimated cost, $80,000.

ALEXANDRIA, S. DAK.—The question of building a plant and water-works is being considered.

SEDALIA, MO.—The council has granted a franchise to the Sedalia Water & Light Co. It is proposed to build a plant at once of 5,000-incandescent light capacity, to cost about $50,000. Work will probably begin before spring. L. P. Andrews, Mgr., and W. N. Powell, Jr., may be addressed. Mr. Powell writes us that the plant will be put in in connection with the Sedalia Ice & Cold Storage Co.'s plant.

IBEX, COLO.—Eugene U. Sayer, Denver, writes us that the contracts for furnishing and installing the necessary machinery for the power and light plant for the mine four miles from Leadville has been let to the Denver Engineering Works Co., Denver, Colo. The plant will have 10 1,200-c. p. arc and 1,000 16-c. p. incandescent lights.

SEATTLE, WASH.—City Engineer Thomson is preparing plans for electrical conduits. It will cost the companies about $200,000 to place the wires underground.

TACOMA, WASH.—The court has handed down a decision in which it decides that the light plant of the Tacoma Light & Water Co. and $100,000 in cash are to be given to the city.——Local papers state that Tacoma Smelting Co. has decided to have its plants operated by electricity. W. R. Rust, Mgr.

PORTLAND, ORE.—H. W. Corbett, Chn. Water Com., writes us as follows in regard to a municipal plant: At the last special meeting of the legislature the water committee was authorized to construct a plant in connection with the water-works, for lighting the city. In case it fails to do so the board of public works is authorized to contract for the lighting. The committee has the matter now under consideration and is gathering statistics as to the cost of lighting in other cities, and will get an estimate of the cost of establishing a plant, either by steam power, or partially so, and may possibly use the surplus water power created by the water-works constructed by the city a few years since. The matter is not fully determined yet; what action will be taken until these statistics and estimates are secured is uncertain.

AZUSA, CAL.—Geo. W. Taylor has been awarded a contract to build a plant, according to reports.

REDLANDS, CAL.—Bids are asked until noon, Jan. 27, for the construction of about 14,000 ft. of cement concrete conduit, 22 ins. in diameter, for the Redlands Electric Light & Power Co. F. C. Finkle, Ch. Engr., Mill Creek Canon,San Bernardino county; F. C. Ferand, Secy.

PRESCOTT, ARIZ.—This city is reported to have voted to issue $15,000 in bonds for a plant. J. W. Dougherty, Mayor.

OTTAWA, ONT.—The city officials are reported as opposed to the Metropolitan Electric Co.'s erecting poles for its wires, they being in favor of electric conduits. The plant of the Metropolitan company will cost about $200,000. It will have a capacity of 5,000 HP., but only 2,000 HP. will be utilized at first. The main power house is to be located at Britannia. Thos. Lindsey may be addressed. John Galt, Cy. Engr.

THORALD, ONT.—W. T. Fish, Clk., writes us that the by-law to extend the plant was defeated at the recent election.

HULL, QUE.—Bids are asked until Feb. 6 for furnishing the materials and for constructing a plant, as described in our advertising columns. R. W. Farley, Cy. Engr.

PUEBLA, MEX.—Plans are being prepared for the extension of the plant of the Compania Anonima del Alumbrado Electric Co. G. Wilson is the electric engineer in charge of the company's plant.

VERA CRUZ, MEX.—The "Two Republics," of Mexico City, states that the state of Vera Cruz has granted a concession for a plant to Fernando Orvananos y Dosal. The plant will be at the Calichal water falls in the Pixquiac River. Work will be begun within two months.

NEW COMPANIES.—Unity Power Co., Chicago; $10,000. Anthony T. Galas, T. Kiser, C. Forsberg.

Grand Rapids Water Power & Boom Co., Grand Rapids, Minn.; to construct dams, mills, canals, etc.; $50,000. D. M. Gunn, H. D. Powers, La Fayette Knox, D. W. Dovan, G. F. Meyers, J. Costello, J. Beckfelt.

Wenstrom Mfg. & Light Co., Baltimore, Md.; $27,155. Ferdinand C. Latrobe, H. Marcus Denison, Gaun M. Hutton, J. Olney Norris, George B. Baker, Peter E. Tome.

Quincy Gas & Light Co., Norfolk, Va.; authorized to purchase, acquire, improve and operate lighting, manufacturing and industrial properties, $100,000 to $600,000. Samuel B. Lawrence, Pres., of New York; John B. Summerfield, Vice-Pres. and Treas., of Brooklyn; James W. Wilcox, Norfolk, is on the board of directors.

St. Helena Electric Light & Power Co., St. Helena, Cal.; $30,000. John E. Firmstone, Geo. W. Crum, W. A. Leonard.

Easton Water Power Co., Philadelphia; $1,000. Alonzo H. Boyer, Treas., 4,712 Richmond St., Philadelphia; Bassen Boyer, Lebanon, Pa.; Thomas Earle, Steelton, Pa.

Electric Light Co., Henderson, Tenn.; $1,500. T. B. Hardmann, N. J. Ozier, J. G. Hardmann, A. R. Ozier, J. C. Winningham.

Englewood Gas & Electric Co., Englewood, N. J.; $400,000; the new company is a consolidation of the Englewood Electric Light and the Bergen Gas Light companies. Frank B. Poor, George W. Conklin.

Council Bluffs Gas & Electric Co., Jersey City, N. J., and Council Bluffs, Ia.; $250,000; F. Gilmore, H. J. Smith, H. Wykes, V. Cumberson, T. J. Kennedy, W. B. Hood, A. E. Walradt.

Sangamon Electric Co., Springfield, Ill.; $10,000; Thomas F. Sheridan, Thomas B. McGregor, Frank G. Howser.

Sherman Electric Light Co., Sherman, N. Y.; $5,000; Charles E. Cobb, F. D. Cornish, Charles H. Corbett, Thomas J. Newell, Thomas P. Poote, Walter A. Edmunds, G. D. Marsh.

Woodill & Hulse Electric Co., Los Angeles, Cal.; $10,000; with all paid in; H. B. Woodill, B. F. Hulse, Clara J. Hulse, Francis J. Woodill, J. M. Raferty.

Van Nort Bros. Electric Co., St. Louis, Mo.; $5,000, with all paid in; Sterling P. Van Nort, Samuel A. Van Nort, James B. Woods.

Alton & East Alton Railway & Power Co., Alton, Ill.; $100,000; Oliver S. Stowell, Henry S. Baker.

Newport Electric Light & Power Co., Newport, N. Y.; $15,000; to furnish light, heat and power in Newport, Poland, Middleville and York; William K. Brown, Henry H. Dexter, Benton K. Brown, Newport, Herkimer county.

North Electric Co., Cleveland, O.; to manufacture telephone and telegraph equipment; $500; H. North, G. C. Steele, D. B. Wick, R. A. Wilbur, M. B. Johnson.

New England Electric Power Co., Portland, Me.; $500,000; P. S. Saltonstall, Milton, Mass.; E. P. Shaw, Brookline, Mass.; S. R. Anthony, Boston.

Seymour Electric Light, Heat & Power Co., Winton, Pa.; $6,000; with $600 paid in; Thos. J. Mack, Treas.; Jas. Bell, Patrick J. Walsh, of Winton.

North Versailles Electric Co., Turtle Creek, Allegheny county, Pa.; $15,000; with $1,500 paid in; A. Lewis, E. W. Boyd, C. H. Snyder, of Turtle Creek.

Globe Light & Heat Co., of Illinois, Cleveland, O.; $500,000; F. B. Many, 809 Cuyahoga St., Cleveland.

New Bremen Electric Light Co., New Bremen, O.; $15,000; D. W. Jay, T. G. Neeley, C. Boesel, J. F. Laufersneith, A. C. Burt.

Astoria Light, Heat & Power Co., Queens Borough, New York city; $500,000; supply gas and electricity and operate in the several counties comprised in New York city; Horace W. Fuller, Augustus R. Moen, Arthur C. Hume, F. R. Foraker, New York; T. Wilbur Spear, Brooklyn.

## BRIDGES.

RUTLAND, VT.—Bids are asked by the Rutland-Canadian R. R. Co. until Feb. 8 (postponement from Jan. 25) for 50 miles of railway work north of Burlington, Vt., as stated in our advertising columns. Considerable bridge construction is included; the superstructures to be erected by the railway company. John W. Burke, Ch. Engr.

BOSTON, MASS.—The following bids were received Jan. 20 for furnishing the material and for constructing the draw foundations of the Summer St. bridge: Coffin Valve Co., Boston, $3,705; Atlantic Works, $4,230; Whittier Machine Co., $4,248; Geo. T. McLaughlin

Co., $4,300; Lockwood Mfg. Co., $4,895; Bertlesen & Petersen, $4,990. William Jackson, Cy. Engr.——The following bids have been received by the city engineer for constructing two masonry abutments of the bridge over the railway at Boston St.: Holbrook, Cabot & Daly, Boston (accepted), $17,450; Collins & Ham, $18,429; W. H. Keyes & Co., $19,893; William L. Miller, $20,445; J. J. McCarthy & Co., $20,600; Thomas A. Rowe, $20,642; Nawn & Brock, $20,775; D. J. O'Connell, $20,800; Daniel J. O'Connell, Jr., & Co., $21,500; Coleman Bros., $22,000; Cyrus Barton, $22,000; William L. Clarke & Co., $22,900; Ross & Fowler, $23,000; Norcross Bros., $24,400; George Bason, $29,700.

SOMERVILLE, MASS.—The county commissioners have ordered the construction of a steel bridge 68 ft. wide over the Fitchburg R. R., on Beacon St.

BROOKLYN, N. Y.—Bids are asked until Feb. 2 for furnishing the material and constructing the Blissville bridge over Newtown Creek at Greenpoint Ave. John L. Shea, Comr. Bridges, Stewart Bldg., New York.

GREECE, N. Y.—The board of county supervisors, Rochester, has decided to secure plans for constructing a new bridge over the Genesee River, between Greece and Irondequoit.

LOCKPORT, N. Y.—A lift bridge will be constructed over the canal at Exchange St., by the state board of public works in the spring, according to reports.

WHITE PLAINS, N. Y.—An appropriation has been voted by the board of supervisors for rebuilding a portion of the retaining wall of the causeway of the Van Cortlandt bridge on the Croton River.

NEWARK, N. J.—The joint bridge committee of Hudson and Essex county have decided to reconstruct the bridges over the Passaic River at Bridge St., Clay St. and 4th St. S. B. Beidelman, Chn.; Frank Scott, Secy.

PHILADELPHIA, PA.—Application will be made to the governor Feb. 10 for the incorporation of the Wissahickon Bridge Co. by James Christie, Albert Major, Charles Major, Frederick B. Johnson and Charles C. Price, all of whom are connected with the Pencoyd Iron Works. It is proposed to construct a bridge over the Schuylkill River, near City Ave.

SAVANNAH, GA.—A bill has been passed by Congress authorizing the Georgia & Alabama Ry. Co. to construct a bridge over the Savannah River. C. P. Hammond, Ch. Engr., Savannah.

CLEVELAND, O.—The new bridge over Cuyahoga River at Wilson Ave. was destroyed by a flood Jan. 18, caused by the breaking of a dam. The structure is 700 ft. long and cost about $350,000.

READING, O.—Daniel Lawrence, Mayor, informs us that it is proposed to construct a bridge over Mile Creek on Clark St. No plans have as yet been made. A petition of the freeholders will be presented to the county commissioners.

BAY CITY, MICH.—Bids are asked by the Bay county bridge commission until Jan. 28 for furnishing and driving white oak piles at the west approach of the Third St. bridge. John M. Bloomshield, Engr.

ST. PAUL, MINN.—The following bids have been received for reconstructing the Sixth St. bridge: Chicago Bridge & Iron Co. (accepted), $14,737; C. L. Strobel, $15,817; Gillett-Herzog Mfg. Co., $16,960; New Jersey Steel & Iron Co., $16,515; William A. Lee, $16,978; Wisconsin Bridge & Iron Co., $16,939.50; Wrought Iron Bridge Co., $16,784.

NEBRASKA CITY, NEB.—Bids are asked until Feb. 9 for constructing bridges for the year 1899, according to reports. H. R. Christy, County Clk.

KANSAS CITY, MO.—The board of public works has approved plans for the construction of a steel bridge 38 ft. wide, to cost $4,000, over the Belt Line Ry. at Kansas Ave.——J. A. L. Waddell, Cons. Engr., Gibraltar Bldg., has been awarded a commission to furnish plans for all bridge work on the lines of the Nipton Ry. Co., Japan, comprising about 800 miles of railway.

ST. LOUIS, MO.—Bids are asked until 12 m. Jan. 27 for furnishing steel columns and beams. James Richardson, Comr. Supplies.

OGDEN, UTAH.—Bids are asked until Feb. 2 for constructing a steel truss bridge, 140 ft. long and 18 ft. wide, over Weber River. The bids received Dec. 28 were rejected. C. R. Hollingsworth, County Clk.

## BUILDINGS.

WORCESTER, MASS.—The building at Harding and Winter Sts., occupied by the Parisian Wrapper Co., was damaged by fire, Jan. 20, causing reported loss of $60,000. S. Kunitz, Proprietor.

BROOKLYN, N. Y.—It is reported that Stephen M. Hoye, 187 Montague St., is one of the prime movers of a project to build a large hotel and music hall at Washington Ave. and Montgomery St.

BUFFALO, N. Y.—The council has directed the board of public works to prepare plans and specifications for the erection of a 16-room school building in District No. 2, to cost about $50,000.

MINEOLA (L. I.), N. Y.—Townsend Scudder, 16 Exchange Place, New York, informs us that competitive plans were received Jan. 20 for the proposed new buildings for Nassau county. Within due time an architect will be selected, specifications prepared and sealed proposals for construction asked.

NEW YORK, N. Y.—Bids are asked by the board of education, at 585 Broadway, until Feb. 2, to complete the work of erection of Public School 14, Newtown; Public School 33, Creedmoor, and Public School 34, Queens, all in the Borough of Queens, under contracts of Martin D. Walsh; Boring & Tilton, Archs., 32 Broadway, New York.——The retail shoe store of A. J. Cammeyer, at 310 to 318 6th Ave., was damaged by fire Jan. 18, causing a reported loss of about $250,000.——Plans are being prepared, according to reports, for a large dry goods warehouse to be erected for Ludwig Bros., on their present site, 14th St., near 6th Ave. Louis Korn, Arch., 37 Maiden Lane.——Plans have been filed by F. H. Walker, 701 St. Nicholas Ave., for two 2-story brick store and office buildings, to cost $50,000. R. R. Davis, Arch.; by Leith & Glenn, 217 West 125th St., for a 7-story brick flat and store building on 7th Ave., near 112th St., to cost $75,000. Neville & Bagge, Archs.; by Harry Fischel, 215 West Broadway, for two 6-story brick flat and store buildings at 221 and 225 3d St., to cost $50,000. Samuel Sass, Arch., 23 Park Row; by the Colonial Building Co., 345 West 85th St., for a 7-story brick and stone flat building, at 83d St. and West End Ave., to cost $175,000. Henry Anderson, Arch., 1180 Broadway; by Abram Bachrach, for two 6-story brick store and flat buildings, at 229 and 231 2d St., to cost $50,000. G. F. Pelham, Arch., 503 5th Ave.; by W. N. Fernbach, 287 4th Ave., for an 8-story brick store and loft building at 41 East 21st St., to cost $50,000. Pollard & Heinam, Archs., 19 Union Square; by Strauss & Rothschild, 107 East 63d St., for four 5-story brick flat buildings on 141st St., and four on 140th St., near 8th Ave., to cost $176,000. Geo. F. Pelham, Arch.; by A. Dooper, 571 East 163d St., for three 5-story brick flat buildings on 137th St., near Alexander St., to cost $120,000. F. A. Schmitt, Arch., 604 Cortlandt Ave.

NEW YORK, N. Y.—Bids are asked by the department of public charities, foot of East 26th St., until Feb. 6 for mason, iron, carpenter, roofing, painting and electric work, hand elevator, plumbing, water supply, gasfitting, heating, steam-fitting, alterations and repairs necessary to the Insane pavilion at Bellevue Hospital, 26th to 28th Sts., 1st Ave.; sureties, $8,000. Also, new plumbing in doctors' bath-rooms in the main hospital building; sureties, $1,500. Also, for altering the old morgue into a stable and carriage-house; sureties, $4,000. Also, for altering the present stable for the drug department and clothing storage; sureties, $4,000.——The 4-story building at 2 to 8 Reade St., occupied by the T. W. & C. B. Sheriden Bookbindery, was damaged by fire Jan. 23, causing a reported loss of $90,000.

ROCHESTER, N. Y.—Bids are asked by the board of education until Jan. 31 for the heating and ventilating apparatus in proposed new No. 12 school building on Howell St. B. G. Saunders, Chn. Bldg. Com.; J. Foster Warner, Arch.

TROY, N. Y.—Press reports state that L. H. Crowley, of the Mansion House, is to erect a modern fireproof hotel building on the site of the present Mansion House, on Broadway; estimated cost, $325,000.

BRYN MAWR, PA.—Competitive plans are being prepared for an addition to the public school building at this place. It will be of stone and brick and three stories in height.

PHILADELPHIA, PA.—Plans are being prepared, according to reports, for the new 4-story hospital building to be erected at 10th and Walnut Sts., for the Jefferson Hospital and College Association; estimated cost, $50,000.——Plans have been completed by J. F. Stuckert & Son, 49 North 13th St., for a 7-story brick and stone building to be erected at 1302 Filbert St. for Horn & Hardart. Bids will be asked for elevators, cornices, heating, etc.——Bids were to have been received Jan 21. for erecting a 6-story brick and terra cotta apartment building at 40th and Sansom Sts., to cost about $60,000. Dull & Peterson, 1110 Walnut St.——Plans are said to being prepared for a new nurses' home for the Episcopal Hospital, Front St. and Lehigh Ave., to cost about $80,000.

PITTSBURG, PA.—Plans have been prepared, according to reports, for an 18-story building to be erected on 6th Ave. for F. Nicola. Rutan & Russell, Archs., Trademen Bldg.——It is proposed to erect a modern office building on the site of the present Third United Presbyterian Church building. Thos. G. McClure may be addressed.

POTTSVILLE, PA.—The following bids were received by the supervising architect, Washington, D. C., Jan. 19, for the low pressure return circulation steam heating and ventilating apparatus for the post office building at Pottsville:

| | | Time |
|---|---|---|
| Chafer & Becker, Cleveland, O. | $2,537 | 60 days |
| Prescott, Buckley & Callanan[1] | 3,190 | " |
| L. L. Lord, Meadville, Pa. | 2,525 | " |
| Edward Joy, Syracuse, N. Y. | 3,000 | 3 mos. |
| E. Keeler, Williamsport, N. Y. | 3,250 | 60 days |
| Gaylord & Eltapenc, Binghamton, N. Y. | 2,200 | " |
| Pittsburg Heating & Supply Co. | 2,335 | " |
| Bromwell, Schmidt & Co., York, Pa. | 2,405 | " |
| Borger Bros. Co., Columbus, O. | 2,240 | " |
| E. Rutzler, New York | 3,370 | " |
| Thomas & Smith, Chicago, Ill. | 2,769 | " |
| David R. Burns, Philadelphia, Pa. | 3,198 | 50 days |
| Chas. B. Scott, Scranton, Pa. | 2,843 | 35 days |

[1]Keesevville, N. Y.

WILKESBARRE, PA.—Plans and specifications are asked until March 15 for a new court house to be erected in this city for Luzerne county. John Guiney, Comr.

WILKESBARRE, PA.—The Osterhout Bldg., a 4-story brick structure at Public Square and East Market St., was destroyed by fire Jan. 24; reported loss, $200,000.

LEWES, DEL.—Bids are asked by the Office of Marine Hospital Service, Washington, D. C., until Jan. 28, to furnish steam laundry machinery for use of the service at Delaware Breakwater, Lewes P. O. G. B. Young, Surgeon in Command.

WILMINGTON, DEL.—The board of education has decided to reject all of the bids lately received for erecting a new high school building on Delaware Ave., the lowest being that of A. S. Reed & Bro., at $164,000. New plans will be prepared for a building to cost about $100,000.

ANNAPOLIS, MD.—Bids are asked by the bureau of navigation until Feb. 16 for the construction of a boat house and an armory at the naval academy. A. S. Crowninshield, Ch. of Bureau; Ernest Flagg, Arch., 35 Wall St., New York.

BALTIMORE, MD.—Bids are asked by the court house commission until Feb. 1 for the installation of the elevator plant in the new city court house, now in course of erection. Wyatt & Nolting, Archs., 4 East Lexington St.

LAFAYETTE, ALA.—Bids are asked until 3 p. m. Jan. 26 for constructing a court house for Chambers county; deposit, $1,000. R. J. Driver, Judge of Probate; Golucke & Stewart, Archs., Atlanta, Ga.

LEESVILLE, LA.—Plans and specifications are asked by the police jury of Vernon parish until March 27 for the erection of a court house to cost about $15,000. E. E. Smart, Pres.

TRENTON, TENN.—The contract will soon be awarded for building a 3-story court house for Gibson county to cost about $30,000. T. J. Happel, Secy. Bldg. Com.

AKRON, O.—The following bids were received by the supervising architect Jan. 16 for the low pressure return circulation steam heating and ventilating apparatus and pipe covering for the Post Office Building, at Akron, O.:

| | | Time. |
|---|---|---|
| Chafer & Becker, Cleveland, O. | $3,498 | 70 days |
| Smith & Oly Co., Cleveland, O. | 3,939 | 70 days |
| L. L. Lord, Meadville, Pa. | 3,432 | 70 days |
| Edward Joy, Syracuse, N. Y. | 4,500 | 4 mos |
| E. Rutzler, New York | 5,100 | 60 days |
| E. P. Porter, Minneapolis, Minn. | 3,242 | 70 days |
| Fitzpatrick & Hoepfner, Columbus, O. | 4,315 | 70 days |
| Kraus, Kirn & Co., Akron, O. | 4,596 | 66 days |
| Saunders & Esswein, Columbus, O. | 4,800 | 70 days |
| George Schisler | 3,659 | 65 days |
| Pittsburg Heating Supply Co[1] | 3,643 | 70 days |
| Borger Bros. & Co., Columbus, O. | 3,420 | 70 days |
| Gaylord & Eltapenc, Binghamton, N. Y. | 3,300 | 60 days |

[1]Pittsburg, Pa.

CLEVELAND, O.—Bids are asked by the board of education until Feb. 11 for the erection of a 12-room addition to the Sowinski school building. H. Q. Sargent, School Director.

TERRE HAUTE, IND.—A 3-story brick and stone building, to cost about $35,000, is to be erected at 4th and Main Sts. for Mrs. Wilson Naylor. J. G. Vrydagh, Arch.

CHICAGO, ILL.—John M. Van Osdel, 225 Dearborn St., is preparing plans for the reconstruction of the former hotel building, at 5463 to 5479 Madison Ave., into an apartment house for A. W. Hayward; estimated cost, $50,000. A 10-story building will be erected at Wabash Ave. and Jackson St., on the site of the Winfield Bldg., by Aldis, Aldis & Northcote; to cost $125,000.

KENOSHA, WIS.—Z. G. Simmons has made an offer to the council to erect a memorial library building for the city; estimated to cost about $60,000.

LAKE GENEVA, WIS.—Reports state that the following contracts have been let for work on a new summer residence for Otto Young, of Chicago, to cost $100,000: Henry Lord Gay, Arch., 92 Dearborn St., Chicago, Ill.: For cut stone, Adam Groth, Joliet, Ill.; masonry, Ponti Bros., Lake Geneva; structural iron, Dearborn Foundry Co., Chicago; fireproofing, Empire Fireproofing Co., Chicago.

IOWA CITY, IA.—A special election will be held in Johnson county, Feb. 21, to vote upon the advisability of erecting a new court house; to cost about $90,000.

ST. LOUIS, MO.—Bids are asked by the supervising architect, Washington, D. C., until Feb. 2, for erecting a new isolation ward and disinfecting annex at the U. S. Marine Hospital in this city.

HOT SPRINGS, ARK.—It is reported that the committee representing the grand lodge of Knights of Pythias of Missouri, Arkansas, Illinois and Indiana, which has been investigating the government site for a national Pythian sanitarium, will recommend the establishment of the institution in Hot Springs; estimated cost, $500,000.

SAN FRANCISCO, CAL.—Bids are asked until Feb. 18 for the construction of a plumbers', tinners' and paint shop, navy yard, Mare Island. Col. Mordecai T. Endicott, Ch. of Bureau, Washington, D. C.

SAN FRANCISCO, CAL.—Bids are asked until Jan. 30 for the erection of a police station on 17th St., and for the erection of police patrol stables on 18th St. John A. Russell, Clk. of Bd. of Supervisors; Shea & Shea, Archs., 26 Montgomery St.

PHOENIX, ARIZ.—F. H. Parker, Secy. of Capitol Bldg. Com., informs us that the following bids were received Jan. 10 for erecting the new capitol building. J. Reily Gordon, Arch., San Antonio, Tex.:

| | |
|---|---|
| Fifield & Gallagher, Phoenix, Ariz. | $114,389 |
| C. Campbell, Phoenix, Ariz. | 100,000 |
| Anderson Cons. Co., St. Louis, Mo. | 126,189 |
| Tom Lovell, Denton Tex. (accepted) | 96,279 |

## WATER-WORKS.

GOULDSBORO, ME.—The Gouldsboro Water Supply Co. has been incorporated with a capital stock of $100,000, of which $200 is paid in; incorporators: J. C. Fox, G. F. Noyes, H. M. Verrill.

COOS, N. H.—The legislature has been asked to grant a charter to Coos & Essex Water Co.

PORTSMOUTH, N. H.—The legislature is to be petitioned to grant the city the right to extend its works to adjacent towns and to Fort Constitution.

BROCKTON, MASS.—The city clerk writes us that the city has voted to apply to the legislature for the right to take water from Silver Lake for an additional water supply. Population, 36,000.

GLOUCESTER, MASS.—W. W. French, Mayor, writes us that the city has voted to purchase the works built by the Gloucester Water Supply Co. The price, however, has not been determined upon. It is not likely that there will be any improvements this year.

ARCADE, N. Y.—G. A. Barnes, Village Clk., writes us that a private company proposes building works here the coming spring. G. N. Cowen is interested.

ELMWOOD, N. Y.—The Elmwood Water Co. has been incorporated with a capital stock of $100,000; directors: Robert C. Pruyn, of Albany; William L. Elkins, Jr., of Philadelphia, and John Dunfee, W. B. Kirk, E. F. Allen, P. J. Mack and C. F. Taylor, of Syracuse.

FISHKILL, N. Y.—Chas. A. Hague, 39 Cortlandt St., New York, has submitted a report for a new water supply for this city. Two propositions are to be considered, one for the purchase of the works of the Fishkill & Matteawan Water Co., and the other for the construction of new works at Ross Farm to cost $217,000. B. F. Greene, Chn., and F. F. Startup, Clk., may be addressed.

NIAGARA FALLS, N. Y.—The board of public works has recommended the installation of a new pump and filter plant at the water-works.

PALMYRA, N. Y.—The Palmyra Water-Works Co. has decided to extend certain of its water mains.

SCHENECTADY, N. Y.—This city has asked for permission to issue $512,000 for improving the water supply.

BRANCHVILLE, N. J.—We are informed that the question of issuing bonds for works for this place must be submitted to a vote of the people. Lewis Van Duyne, Engr., Boonton, N. J.

HAMMONTON, N. J.—It is stated that a company is being organized to build works at a cost of about $25,000.

SPRING LAKE, N. J.—Bids are asked until Feb. 18 for furnishing the materials and for constructing works, as described in our advertising columns. Lehlbach Bros., Engrs., Newark, N. J.; H. C. Van Arsdale, Clk.

DUNCANSVILLE, PA.—An election will be held Feb. 23 to vote on the question of issuing bonds for works.

GLEN CAMPBELL, PA.—The Glen Water Co. was incorporated Jan. 23 with a capital stock of $15,000, of which $1,500 is paid in, by J. D. Clark, of Glen Campbell; Clarence Smith, of Hillsdale, Pa., and Miles Wrigley, of Mahoffey, Pa.

HARRISBURG, PA.—The Eastmere Water Co. has been incorporated with a capital stock of $15,000 to furnish water for domestic and other purposes in the suburb of Eastmere. The directors of the new company are: J. G. Ewing, Harrisburg; F. H. Alleman, Steelton, and Roy G. Cox.

MILLVALE, PA.—C. W. Dankney, Clk., writes us that a 2,000,000-gallon pump has been purchased from H. R. Worthington, New York, for $4,845.

PITTSBURG, PA.—Bids are asked until 2 p. m. Jan. 27 for furnishing 28 cast-iron valve gates for the Brilliant pumping station. E. M. Bigelow, Dir. Dept. Pub. Wks.

SPRINGBORO, PA.—A. R. Seelye, Burgess, writes us that an election will be held Feb 21 to vote on the question of issuing $85,000 in bonds for gravity works, the supply to be secured from springs. Population, about 700.

WARREN, PA.—Wm. O'Neil, Chn. Water Com., writes us that the decision of the court in the case of the Warren Water Co. against the borough of Warren granting the former a permanent injunction restraining the latter from

**issuing bonds to construct works was handed down Jan. 16. At a recent meeting of the council it was decided to appeal the case to the supreme court.**

CLARKSBURG, W. VA.—We are informed that the contract for building improvements to the water-works has been let to W. B. Osborn, Clarksburg. The following contracts for material have been let: Pipe, Addyston Pipe & Steel Co., Cincinntai, O.; hydrants, Ludlow Valve Mfg. Co., Troy, N. Y.; pump, Snow Steam Pump Works, Buffalo, N. Y.; boilers, Erie City Iron Works, Erie, Pa. The water supply will be secured from Middle Island Creek. Population, 1,000.

MARTINSBURG, W. VA.—A. F. Lambert, Cy. Clk., writes us that the city has asked the legislature to grant this place authority to issue bonds for a new set of pumps, of 2,500,000 gallons capacity, and for four miles of new water pipe. Specifications will be prepared after the act is passed.

CHARLOTTE, N. C.—This place has applied for authority to issue $300,000 in bonds, part of which is to purchase the works of the Charlotte City Water Co., according to reports.

ATLANTA, GA.—Bids are asked until Jan. 28 for furnishing 180 tons of 6, 8, 10, 12 and 16 in. cast-iron water pipe and ordinary standard weight specials. Park Woodward, Supt. Water Wks.

DELAND, FLA.—It is proposed to sink another well for an increased water supply.

EVERGREEN, ALA.—C. S. Rabt, Mayor, writes us that the question of appointing a committee to investigate the question of building works is being considered.

PRATT CITY, ALA.—P. M. McNeil writes us that the bill before the legislature asking for authority to build works will not become a law before Feb. 15. The question of building the works will then have to be voted upon by the people.

GREENWOOD, MISS.—We are informed that this place has decided not to build works and a sewerage system. H. S. Kitchell, Engr., Greenwood.

LAKE PROVIDENCE, LA.—It is stated that this place is arranging for the construction of works and an electric plant, for which $17,500 in 5% bonds were voted Dec. 15. R. L. Hill may be addressed.

BROWNSVILLE, TENN.—R. E. King writes us that the legislature will be asked to grant this city authority to issue $50,000 in bonds for extending the municipal works. After that the question will have to be voted upon by the people. For further information address T. B. King.

BEREA, O.—T. J. Quayle, Mayor, has appointed a commission to make new arrangements looking towards the construction of city works, which question at present the city has been enjoined from voting upon.

CUYAHOGA FALLS, O.—D. F. Feherby, Mayor, writes us that an election will be held Feb. 18 to vote on the question of building the proposed works.

FRANKTON, IND.—The council has voted to build works. The committee, consisting of Edward Frank, Elwin Smith, J. D. Hurst and Perry Jones, is securing information.

WINCHESTER, IND.—S. D. Fox, Cy. Clk., writes us that the time for letting the contract for the construction of the works and electric light plant has been postponed. Daniel W. Mead, Rockford, Ill., has been engaged to prepare plans and specifications for the plants.

DETROIT, MICH.—Wicks Bros., Saginaw, Mich., have been awarded the contract for furnishing four boilers with Murphy stokers at $13,977. Other bids were as follows: Cahill Sales Department, Pittsburg, Pa., $16,355; Cassius C. Peck, Rochester, N. Y., $14,425; Babcock & Wilcox Co., New York, $22,500.

BARABOO, WIS.—The Baraboo City Water-Works Co. has been asked by the council to increase its water supply furnished to this city.

ELKHART LAKE, WIS.—Bids are asked until Feb. 20 for furnishing the materials and for constructing works and an elevated tank; estimated cost, $5,000. G. A. Kraemer, Village Clk.

AUDUBON, IA.—The council is reported to have ordered a survey of the west side of Blue Grass for a better water supply.

BLOCKTON, IA.—Jackson & Moss, Iowa Loan & Trust Bldg., Des Moines, are preparing plans and specifications for works. Population, 1,000. Not Brockton, as stated last week.

OTTUMWA, IA.—The council is considering the question of submitting to the people on March 27 the question of municipal works. Alderman Hoglund, Chn. Water Com.

SHELBY, IA.—This place voted Jan. 10 against issuing $4,000 in bonds for works, according to reports.

DULUTH, MINN.—An election will be held Feb. 7 to vote on the question of issuing $150,000 in bonds for extending the mains, as noted in our issue of last week.

OWATONNA, MINN.—We are informed that the plans for the proposed increased water supply for this place has not been decided upon. Investigations are being made to determine the best plan; a new artesian well or an air lift in present well. Chas. F. Loweth, 94 East 4th St., St. Paul.

STURGIS, S. DAK.—Levi Decker is reported as organizing a company to sink an artesian well for a new water supply.

MANKATO, KAN.—This place voted Jan. 17 to issue $20,000 in bonds for works. H. V. Hinckley, Engr., Topeka, Kan.

KANSAS CITY, MO.—The council is considering an ordinance authorizing an appropriation of $9,200 for constructing a 16-in. main on 17th St. W. Kiersted, Ch. Engr.

ST. LOUIS, MO.—Bids are asked until Feb. 7 for furnishing 4,100 tons of 6, 12, 20 and 30-in. cast-iron water pipe, 200 tons special castings, 325 fire plugs, 179 6, 12, 20 and 30-in. stop valves, etc., and also for laying about 35,600 ft. of water pipe, taking up 9,000 ft. of 6-in. water pipe, etc. Robert E. McMath, Pres. Bd. Pub. Improvements.

ST. LOUIS, MO.—Bids are asked until 12 m., Jan. 26, for furnishing 20,000 lbs. of zinc refined pig lead, f. o. b., for use by the water commission. Jas. Richardson, Comr. of Supplies, City Hall.

JUNCTION, ARK.—It is stated that this place proposes to build works. W. W. Davis, Mayor.

OREGON CITY, ORE.—It is proposed to build new works at a cost of about $30,000, the new water supply to be secured from the Clackamas River, instead of the Willamette, from which the present supply is secured. Chas. H. Caufield, H. C. Stevens and T. L. Charman, Water Comrs.; C. D. Latourette, Mayor.

BERKELEY, CAL.—Jos. J. Mason, 425 California St., San Francisco, writes us as follows regarding the proposed new works: The town is supplied from a system of springs and tunnels, which up to about four years ago served its purpose admirably. The town growing so fast, the owners of the works were not able to keep up with its needs. Certain restrictions of the company have called forth considerable dissatisfaction. On the board of trustees was L. J. Le Conte, a civil engineer. He took up the question of municipal ownership, while others were interviewing the two companies that supplied Oakland to see if they or either of them would extend their mains as far north as Berkeley, but which proposition was declined. Mr. Le Conte brought up the question at one of the meetings of the trustees, and after considering the matter a committee of three citizens was appointed and $2,500 set aside to enable it to hunt for water and engage experts. This committee set to work and engaged Col. G. H. Mendell, U. S. Engr., San Francisco, and Mr. Grunsky. These gentlemen, assisted by Mr. Le Conte and C. L. Huggins, Town Engr., found a piece of marsh land at the mouth of San Pablo and Wild-Cat Creeks, near San Pablo. After trying to bond it and finding it impossible, a meeting of about ten gentlemen was called and the situation explained to them. They agreed to sign a joint note for the price of the land, $10,000. The local bank then advanced the $10,000, the land was bought, and boring commenced. At a depth of 170 ft. a flowing well was struck, giving about 20,000 gallons a day. They are still boring with a certainty of getting all the water the city shall need for the next 50 years. At present the 122½ acres belong to the parties who signed the note, but when they have demonstrated to everyone's satisfaction that the water is there, the town will be offered the property at the same price it cost, and asked to bond itself for the amount necessary to buy the land, build pumping machinery, reservoirs, lay mains, etc. A rough estimate puts the figure at $450,000, but this may be reduced. The wells will be about seven miles from Berkeley, and the water required will be pumped to an elevation of about 400 ft.

COLTON, CAL.—G. E. Slaughter, Cy. Clk., writes us that there will be wanted a mile of 18-in. steel water pipe, one or two 40-HP. motors, etc., for the proposed improvements to the works.

MONROVIA, CAL.—Bids are asked until 7:30 p. m., Jan. 28, for boring one or more 10 and 12-in. wells on the Chapman Ranch, for an increased water supply. W. A. Walker, Cy. Clk.

PETALUMA, CAL.—The committee recently appointed to investigate the works of the Sonoma County Water Co. with a view to its purchase by the city, has submitted its report. The proposition of bonding the city will probably be voted on at a special election soon to be called for the purpose.

VISALIA, CAL.—Bids are asked until Feb. 9 for the purchase of a franchise for laying water and gas mains on certain streets. T. W. Twaddle, Chn. Bd. Supervisors of Tulare county.

WILDOMAR, CAL.—The question of securing a water supply is being considered. Wm. Collier, Riverside, Cal.

PRESCOTT, ARIZ.—The new council is reported as taking active steps towards the immediate construction of the proposed works. Efforts are now being made to sell the bonds. John W. Dougherty, Mayor.

HEBER CITY, UTAH.—A. C. Hatch writes us that a new company is intending to organize with a capital stock of $16,000, to build works for this place; about $6,000 was subscribed up to Jan. 17. Water will be secured from springs, 1½ miles distant. No engineer had yet been engaged. Further information can probably be had in about a month. Population, 2,000.

SALT LAKE CITY, UTAH.—Local papers state that the legislature will be petitioned to grant this city authority to issue $500,000 in bonds for an additional water supply. Mayor Clark, Councilman Siddoway, of the committee, and F. C. Kelsey, Cy. Engr., may be addressed.

MONTREAL, QUE.—The following bids were received by the fire committee Jan. 19 for reconstructing the burned stand-pipe: A. E. Whitehouse, $4,000; Lymburner & Matthews, $3,800; Fire Extinguisher Co., Chicago, $4,500, and B. Ledoux & Co., $2,720.

YMIR, B. C.—D. C. Cummings, formerly of Northport, Wash., is reported to have been awarded the contract for building the proposed works. Bids for furnishing the materials are wanted at once.

## IRRIGATION.

WORMSER, MONT.—Bids are asked by the Holland Irrigation Canal Co., Wormser, until 10 a. m., Jan. 28, for constructing an irrigation canal in Sweet Grass county. A. Wormser, Pres.

PASADENA, CAL.—Reports state that the Yuma Valley Land & Water Co. is arranging to begin the proposed cooperative water enterprise in Yuma Valley as soon as the right of way is granted by the U. S. supreme court. There are 50,000 acres of bottom land in the valley, and it is proposed to build a canal that will carry 30,000 ins. of water from the Colorado River, at a point near Yuma, to these lands by gravity. Over 23 miles of this canal have been staked out and sites for two reservoirs have been located. J. D. Yocum, Pres.; W. H. Stevenson, Engr.

LEWISTON, IDAHO.—Engineer Spencer, Salt Lake City, Utah, is making a survey for a ditch to be constructed by the Sweetwater Irrigation Co. to convey water from Tauming to this city, according to reports.

OAKLAND, CAL.—It is reported that a pumping plant is to be constructed in connection with the old Woodbridge canal system, which will irrigate 10,000 acres in the San Joaquin valley.

ABBEVILLE, LA.—Reports state that Richard H. Mills will construct an irrigation ditch for cultivating rice lands.

## SEWERAGE.

EVERETT, MASS.—Chas. Bruce, Pres. Bd. of Aldermen, writes us that the city has petitioned the legislature for permission to issue bonds outside of the debt limit to the amount of $100,000 for the extension of the system. Probably nearly that amount will be spent the coming season. This will practically complete the system. Brick and pipe will be used. C. Harrison, Engr., Everett.

FOXBORO, MASS.—Louis W. Hodges, Town Clk., writes us that the town has obtained from the legislature the privilege of constructing a system. No action has yet been taken in relation to the construction of the system, nor is it probable that any action will be taken the present year.

STOCKBRIDGE, MASS.—D. C. Clark and C. B. Swinburn have made surveys for the proposed system. Selectman Aymar may be addressed.

WORCESTER, MASS.—Fred. A. McClure, Cy. Engr., is preparing plans for the proposed Millbrook sewer.

HARTFORD, CONN.—Bids are asked until Feb. 1 for constructing about 4,000 ft. of pipe and about 1,800 ft. of brick sewers. Chas. H. Northam, Pres. Bd. St. Comrs.

BROOKLYN, N. Y.—The local board of the 7th district has recommended the construction of a sewer in Huron St. at a cost of about $175,000.—The municipal board of the borough of Queens will be petitioned to build a system in the Ridgewood and Wyckoff Heights districts. M. J. Goldner, Deputy Comr. of Sewers.

FULTON, N. Y.—We are informed that bids will be asked early in February for constructing 1,500 ft. of 18 and 15-in. pipe sewers, at a cost of $1,000, and also for brick paving to cost $9,000. O. C. Breed, Cy. Engr.

PLATTSBURG, N. Y.—The committee has recommended that the village spend $30,000 in improving the sewers, etc.

SCHENECTADY, N. Y.—Our correspondent informs us that this city has asked for authority to issue $135,000 in bonds for constructing a system.

WATERTOWN, N. Y.—The city engineer has been directed to prepare specifications for a trunk sewer in a certain street.

WHITE PLAINS, N. Y.—The council will probably soon ask for bids for constructing an addition to the sewage disposal beds, according to reports.

EAST ORANGE, N. J.—The township committee has passed an ordinance authorizing the construction of a storm water sewer along the proposed boulevard to be constructed by the park commission; estimated cost, $60,000, of which the county will pay $11,000.

NEWARK, N. J.—A bill to be introduced in the legislature for a joint sewer for Newark, South Orange, Vailsburg, Milburn, West Orange and Irvington, has been prepared by City Counsel E. L. Price, of Newark. The outlet of the sewer is to be on Staten Island Sound below Elizabethport. The work is to be done by a joint commission of representatives of all the municipalities, and the court is to appoint commissioners to assess benefits.

NEWARK, N. J.—It is proposed to construct a 20-28-in. brick to 12-in. pipe sewer in four streets. M. F. McLaughlin, Gen. Supt. of Sts.

STOCKTON, N. J.—Bids are asked until Feb. 9 for constructing 36 × 54-in. to 20 × 30-in. brick sewers in several streets. W. F. Weiss, Chn. Com.; Wm. S. Abbott, Town Clk.

STEELTON, PA.—Bids are asked until Feb. 8 for furnishing 13 miles of sewer pipe, as stated in our advertising columns. Alexander Potter, Engr., 137 Broadway, New York; J. D. Young, Borough Secretary.

AIKEN, S. C.—C. A. Robbe, Augusta, Ga., has been awarded the contract for building the pipe sewers and the filtration beds at $20,917. The bids are given under Contract Prices. W. J. Hay & Son, Cleveland, O., have bought $95,000 of 4½% 40 and 50-year bonds for $26,741.

ATLANTA, GA.—Bids are asked until Feb. 7 for furnishing sewer pipe, manhole and catchbasin castings, cement, curbing, etc., and for constructing such sewers as may be required during the year. D. G. Wylie, Comr. Pub. Wks.

DAYTON, O.—L. M. Turner, Cy. Engr., writes us that he has been directed to prepare plans for a sewer in district 9, for which an appropriation of $30,000 has been made.

GREENSBURG, IND.—Web Woodfield writes us that nothing has yet been done in regard to building a system, nor is there anything likely to be done for some time.

GRAND RAPIDS, MICH.—The city authorities are reported to have decided to ask the legislature to build a large sewer from the Soldiers' Home to a point below the intake of the water-works.

CHAMPAIGN, ILL.—City Engineer Tarrant is preparing plans for a sewer to drain Clark and Randolph Sts. at a cost of $11,000.

LAWRENCEVILLE, ILL.—The council is considering the question of granting a 20-year franchise for a system to Mr. Bray, of St. Louis, Mo., and Superintendent Quinn, of Mount Carmel, Ill.

MATTOON, ILL.—Arrangements are reported as being made for the proposed system to cost about $60,000, according to reports. A. C. Loomis, Cy. Engr.

WAUWATOSA, WIS.—The board of supervisors, it is reported, will build a new system for the county institutions at a cost of about $22,000.

ANAMOSA, IA.—M. Tschirgi, Dubuque, Ia., is reported to have been engaged to prepare plans for a system.

SIOUX CITY, IA.—It is proposed to build a sewer in Perry Creek at a cost of about $20,000. Alderman Smith, Chn. St. Com.

SLEEPY EYE, MINN.—Geo. Glatzbach, Village Recdr., writes us that the village proposes to put in a pipe sewer to cost about $2,000.

SOUTH OMAHA, NEB.—It is proposed to construct new sewers in two streets.

DENVER, COLO.—Wm. H. Taylor, Secy. Bd. Pub. Wks., writes us that the following bids were received Jan 16 for constructing the Capitol Hill storm sewer, district No. 1; engineer's estimate, $380,664:

| | |
|---|---|
| James J. Fleetford, Denver, Colo. | $244,160 |
| The J. M. O'Rourke Const'n Co., Denver | 309,735 |
| The Queen City Construction Co., Denver | 322,807 |
| W. C. Bradbury & Co., Denver | 329,413 |
| Brewer & Schrader, Denver | 334,411 |
| Tully & Stenger, Detroit and Omaha | 347,500 |
| Ross, Fraser & Co., Denver, Colo. | 349,367 |
| The R. P. McDonald Building Co., Denver | 353,128 |
| The Denver Paving Co., Denver | 357,303 |
| Wickham Bros., Council Bluffs | 364,993 |
| Katz & Crandall, Omaha, Neb. | 374,172 |

MEDFORD, ORE.—This place voted Jan. 10 to build a sewer. H. L. Gilkey, Mayor; N. B. Bradbury, Trustee.

GRASS VALLEY, CAL.—The board of city trustees have rejected the bids recently received for the purchase of $40,000 of bonds for the proposed system. New bids will be asked for at once.

BLUEFIELDS, NICARAGUA.—Geo. Jacquillon, Government Engr., Bluefields, it is stated, is visiting the United States in order to make contracts for furnishing material for improving the drainage of this city, estimated to cost $16,000. Mr. Jacquillon has been stopping at the Denechaud Hotel, New Orleans, La.

## GARBAGE DISPOSAL—STREET CLEANING

PHILADELPHIA, PA.—David McMahon & Co., Germantown, Philadelphia, has been awarded the contract for cleaning the streets in the 5th district, at $81,887. Rich'd P. Bennis has the contract for the 6th district at $21,474.

BALTIMORE, MD.—Capt. F. R. Bye, Comr. St. Cleaning, in his annual report, has recommended that the city own horses for the street sweepers and sprinklers, instead of hiring them; that the cleaning of sewers and control of the scavenger work be returned to the health commissioner's department, where they, he says, belong; that the city abolish the gang system of street sweepers, and adopt the block system, or one man for each block, and that asphalt supplant cobblestones for paving purposes.

EAST LIVERPOOL, O.—The question of accepting a certain proposition to build a garbage disposal plant is being considered by the board of health. J. Cross Kerr, Chn.

LEXINGTON, KY.—The question of adopting better methods for cleaning the streets of this city is being considered. At present the expenses for street cleaning, etc., amount to about $10,000 a year.

OAKLAND, CAL.—The council has refused to grant a 50-year franchise for operating a garbage disposal plant to J. W. Northrup.

SAN FRANCISCO, CAL.—Lieut.-Col. J. M. Marshall, Deputy Q. M. Gen., U. S. A., Ch. Q. M., informs us that the following bids were received Jan. 18 for furnishing and constructing a crematory at the Presidio, San Francisco; all local bidders but two:

| | |
|---|---|
| Mathew McGowan, 813 Oak St. | $2,626 |
| Wm. A. Butler, 40 New Montgomery St. | 2,490 |
| Sinnot & McCann, 318 Bush St. | 2,932 |
| M. McCarty, Stockton, Cal. | 2,890 |
| Victor Hoffmann, 2037 Eucinal Ave., Alameda | 2,999 |
| John Tuttle, 516 Haight St. | 2,735 |
| J. H. McKay, 2408 Washington St. | 2,430 |
| R. W. Beattie, 1007 Larkin St. | 1,970 |

## STREETS AND ROADS

BURLINGTON, VT.—Bids are asked by the street commissioners until Feb. 6 for furnishing curbing and other cut stone for the year 1899.

BOSTON, MASS.—Alderman Brennan has introduced a resolution to have the board of estimate and apportionment appropriate $50,000 for the paving of Blue Hill Ave. from Daimatier St. to Grove Hall.

BROCKTON, MASS.—The council is considering the question of paving the two main throughfares.

QUINCY, MASS.—The question of borrowing $150,000 for laying out streets has been proposed in the council.

ALBANY, N. Y.—Bids are asked by the board of contract until Feb. 6 for constructing 10,142 sq. yds. of brick paving, 5,046 lin. ft. of straight curbing, 478 lin. ft. of curved curbing, 21,137 sq. ft. of 5-ft. flag, 1,330 sq. ft. of 4-ft. flag, 11 receiving basins, 25,500 sq. ft. of brick sidewalk, 11,444 sq. ft. of sidewalk to be relaid and 3,400 sq. ft. of sod on portions of Hamilton, Dove and Elizabeth Sts. T. J. Lanahan, Clk.

FULTON, N. Y.—O. C. Breed, Cy. Engr., writes us that plans have been submitted and bids will be asked early in February for 2,200 sq. yds. of brick paving; estimated cost, $9,000.

CHESTER, N. Y.—The council has decided to pave Upland St. from 12th St. to Providence Ave. Crosby M. Black, Mayor; Frank W. Harrison, Clk.

RENSSELAER, N. Y.—A contract has been awarded to Robert H. Strong, Albany, at $5,088, for extending and improving Washington St.

ATLANTIC CITY, N. J.—The council has awarded a contract to Moore & Turner, of Atlantic City, for paving several of the principal crosstown avenues from Atlantic Ave. to the beach; to cost about $30,000.

CAMDEN, N. J.—A contract has been awarded to Aaron Ward for the paving of Broadway, Federal St. and Kaighn Ave. with sheet asphalt.

ELIZABETH N. J.—The joint committee, consisting of Councilmen Ryan, Ford, Berry, Engle and others, has recommended that 13 miles of streets be paved at an estimated cost of $401,400.

HOBOKEN, N. J.—Chief Engineer Van Keuren, of the street and water board, is preparing plans for the improvement of North, Irving and Waverly Sts. and Nelson and Reservoir Aves. A petition will soon be presented to the board for repaving New York Ave. with asphalt.

JERSEY CITY, N. J.—The street and water commissioners are in favor of a proposition to pave Newark Ave. between Warren St. and Jersey Ave. with asphalt at an estimated cost of $15,000.

MIDVALE, N. J.—Bids are asked by the board of county freeholders, Paterson, N. J., until Jan. 31, for grading and macadamizing the main road through Midvale, Pompton township. Edward N. Kevitt, Dir.; Geo. W. Bottyle, Clk.

PATERSON, N. J.—Wm. Ferguson, Cy. Engr., informs us that no definite action has been taken by the board of aldermen in regard to the streets to be paved with asphalt and brick this year. A law has been passed by the legislature authorizing the expenditure of $100,000 for paving, each year for 10 years.

PLAINFIELD, N. J.—Bids are asked until Feb. 6 for furnishing material and macadamizing on East 9th St., East 6th St. and Franklin Place. Jas. T. McMurray, Cy. Clk.—A hearing will be given by the council Feb. 6 to decide on the proposed macadamizing of West 3d and West 4th Sts. Eliot T. Barrows, Chn. Com.

DARBY, PA.—The council has decided to macadamize Pine St. between 5th St. and Darby Creek.

ATLANTA, GA.—Bids are asked by council until Feb. 6 for certain curbing and pipe sewers.

NEW ORLEANS, LA.—Bids are asked until Jan. 30 for asphalt paving on Berlin st. and Ursulines Ave. W. S. Douglass, Comptroller.

LOUISVILLE, KY.—The board of public works has received the lowest bids for asphalt paving, as follows: Barber Asphalt Paving Co., on East Broadway from Highland to Transit, $4,795; from Transit to Slaughter, $5,971; from Slaughter to Longest, $11,645; from Longest to Finzer, $4,133; Chestnut St., from 31st to 34th Sts., $12,560; from 34th St. to Shawnee Park, $45,534. Alcatraz Co., Hepburn Ave., from Barrett to Edward, $5,079; from Edward to Rubel, $5,679; from Rubel to Von Borries, $5,290; Von Borries Ave., from Baxter to Hepburn, $3,302; from Hepburn extended, $396.

CINCINNATI, O.—Bids are asked by the county commissioners until Feb. 25 for improving the south approach of West Eighth St., Delhi township. Eugene L. Lewis, Audr.

CLEVELAND, O.—Bids are asked until Feb. 15 for grading, draining, curbing and brick paving on portions of nine streets. Geo. R. Warden, Dir. Pub. Wks.—The council has passed ordinances to pave, etc., portions of Sheppard St., Euclid Ave., Oak Park St., Parkman Lane, Myrtle Court and Liberty St. H. H. Burgess, Cy. Clk.

DAYTON, O.—We are informed that F. M. Turner, Cy. Engr., has been directed to prepare plans and specifications for brick and asphalt paving.

TOLEDO, O.—Plans are being prepared by the city engineer for the paving of Greenwood Ave., Delence St., Broadway, Woodruff Ave. and 23d St.

BEDFORD, IND.—Bids are asked by the council until Feb. 22 for brick paving. G. C. Houston, Cy. Engr., writes that the proposed paving will extend over about 17 blocks of streets.

FORT WAYNE, IND.—The city engineer has been instructed to prepare plans for sheet asphalt paving on East Lewis St., East Berry St. and an alley between Lewis St. and Douglass Ave.

OCONTO, WIS.—This city proposes to purchase a rock crusher and steam road roller and to macadamize the main street, according to reports.

LUDINGTON, MICH.—A. E. Carlien, ex-Mayor, is urging a proposition to have the city charter changed before the spring election, so that $125,000 of bonds may be voted for repaving streets.

EAU CLAIRE, WIS.—Bids are asked by the council until 3 P. M. Jan. 30 for repaving about 9,349 sq. yds., with brick, of South Barstow and Kelsey Sts., as stated in our advertising columns. C. L. Lee, Chn. Com.; C. A. Alderman, Cy. Engr.

WATERTOWN, WIS.—Henry Mulberger, Mayor, writes us that the proposed district to be paved with brick includes 18 blocks. At first it was proposed to pave five blocks; but the amount has been extended with a view of obtaining lower average prices. Bids will be opened about the last week of April or the first week of May. Address George Stanchfield, Engr., Fond du Lac, Wis.

SIOUX CITY, IA.—A petition will be presented to the council for brick paving on Pearl St.

KANSAS CITY, MO.—Bids are asked until Jan. 28 for grading on Cherry, Central and Locust Sts. Henry A. Wise, Cy. Engr.—The park board is considering the question of constructing the Penn Boulevard to connect the Westport Park district with Penn Valley Park.

DALLAS, TEX.—A contract has been awarded to the Franklin Fireproofing Co. for grading and asphalt paving on Main St.

HOUSTON, TEX.—The council has received the lowest bids for paving on Main St., as follows: Hipp & Key, American cement and broken stone, $40,842; Ayres Asphalt Co., Portland cement and broken stone, $42,856; Louisiana Improvement Co., American cement and gravel, $39,948; Portland cement and gravel, $42,647. The itemized bids will probably be given next week.

OLYMPIA, WASH.—It is proposed to construct a state road from Montesano via North River valley, Willapa, South Bend, the Nehma River, the Nasel River and Gray's River valley, to Brookfield, on the Columbia River; to cost about $15,000.

SPOKANE, WASH.—Plans and specifications are being prepared for the paving of Howard, Lincoln, Monroe and Stevens Sts. with asphalt on a 4-in. concrete foundation. The Stevens St. pavement is estimated to cost $22,805, the Lincoln St. pavement, $11,230, according to reports.

## MANUFACTURING PLANTS.

BRIDGETON, R. I.—The mill of the Laurel Hill Yarn Co. and two tenement houses, together with the stockhouse and outbuildings of the mill, were destroyed by fire Jan. 21, causing a reported loss of $75,000.

LOCKPORT, N. Y.—We are informed that Luke Huston, of Lockport, has purchased the Niagara Mill and will convert the same into a cold storage plant. The mill is 40 × 160 ft. Plant not yet decided on.

PHILLIPSBURG, N. J.—It is reported that the Alpha Cement Co., whose plant is located at Alpha, near Phillipsburg, has decided to increase its capital stock from $500,000 to $1,000,000, and to make extensive improvements.

DUNCANSVILLE, PA.—The Portage Iron Works, said to be controlled by A. R. Whitney and others, of New York, has increased its capital stock from $250,000 to $400,000, preparatory to the enlargement of its plant. About 600 hands are employed.

WILMINGTON, DEL.—William Greenwalt & Son have secured a permit to erect an addition, 66×76 ft., to the plant of the Wilmington Malleable Iron Co., on Locust St., between Taylor and 9th Sts.

SELMA, ALA.—Reports state that the Central Cotton Oil Co., composed of C. W. Hooper, L. Lamar and E. Lamar, will build a new brick mill with a daily capacity of 100 tons of seed, to cost about $90,000 with machinery complete.

MACON, GA.—W. S. Payne is said to be about to build a large cotton factory near Crump's Park.

HAMILTON, O.—The David Folz Paving Co., of Cincinnati, expects to build a new asphalt plant at this place in the spring, to cost about $20,000.

ROCHESTER, MICH.—The Oxnard Construction Co., 32 Nassau St., New York, is reported to have been awarded the contract for building a new beet sugar plant at Rochester for the Detroit Sugar Co., to cost about $470,000. Work is to be completed by Sept. 15. J. H. Holdman, Chn. of Citizens' Com., Rochester.

CHICAGO, ILL.—The Cole Mfg. Co. will soon erect a new factory building on Western Ave., near the Chicago Junction Ry.

LA CROSSE, WIS.—The Northern Machine Works, of Minneapolis, Minn., has received the contract for furnishing the machinery for the new factory of the Segelke-Kohlhaus Mfg. Co., to cost over $20,000.

APPLETON, WIS.—An explosion of a boiler in the Wilby Bros. flouring mill, Jan. 17, caused a reported loss of $30,000, completely destroying the engine house.

MANILA, PHILIPPINES.—Bids are asked by Colonel J. G. C. Lee, Q. M., 415 Pullman Bldg., Chicago, Ill., until Feb. 1, for furnishing and erecting a refrigerating and ice-making plant at Manila, for the use of the U. S. army in the Philippines. Estimated cost, $100,000; time, six months.

## GAS PLANTS.

BALTIMORE, MD.—Reports state that the Winchester Gas & Electric Light Co. contemplates the improvement of its plant by the erection of a new gas holder, etc., at a cost of several thousand dollars.

PORT HURON, MICH.—The Michigan Development Co. has applied to the council for a franchise.

KANSAS CITY, MO.—The Weber Gas & Gasoline Engine Co. will construct a new plant in the near future. The building will cost about $20,000.

OSAGE, OKLA.—Bids are asked by the department of the interior, Washington, D. C., until Feb. 13, for furnishing the material and for constructing a gasoline plant, at the Osage agency. Wm. J. Pollock, U. S. Agent, Pawhuska, Okla.; W. A. Jones, Comr., Washington.

EXETER, CAL.—Bids are asked by the county supervisors, Visalia, Cal., until Feb. 9, for the purchase of a 10-year franchise to lay pipes for water and gas. T. B. Twaddle, Chn.; John Cutler, Jr., Clk.

GRASS VALLEY, CAL.—The Nevada County Electric Power Co. proposes to reconstruct its gas plant. General Manager De Sabla may be addressed.

NEW COMPANIES.—Venus Natural Gas Co., Venus, Pa.; $2,500, with $250 paid in; to supply gas in Pine Grove and Washington townships; Adam Kropp, W. W. Powell, C. H. Confer, B. F. Springer, W. F. Shawkey, Venus, Pa.

Globe Oil, Natural Gas & Mineral Co., 100 South 10th St., Newark, N. J.; $50,000; to sink and drive wells for oil and natural gas; A. J. Connolley, Newark; Jonathan Champlin, Penn Yan, N. Y.; S. W. Titus, Brooklyn, N. Y.

Northwestern Gas Co., Rushville, Ind.; $2,000; to operate gas and oil wells; R. F. Stanley, W. B. Hill, A. F. Bundy.

Federal Gas & Fuel Co., Columbus, O.; $2,000,000; to drill gas wells in Fairfield and Hocking counties; D. H. Kimball, C. O. Evarts, L. A. Cobb and N. A. Gilbert. The company is a consolidation of the Columbus Natural Gas & Fuel Co. and the Columbus Gas Light & Coke Co.

Keystone Oil & Gas Co. of Chicago, Charleston, W. Va.; $1,000,000; Robt. L. Gregory, J. M. Childers, Robt. Suter, Chas. F. Harford and Frank F. French.

Great Eastern Oil Gas Co., Towanda, Pa.; $3,500, with $350 paid in; to mine and bore for petroleum and natural gas and to sell and transport the same; L. R. Frost, Treas.; M. M. Spalding, C. M. Pratt, D. D. Evans, T. M. Buttles, Towanda, Pa.

Council Bluffs Gas & Electric Light Co., Council Bluffs, Ia.; $250,000.

## MISCELLANEOUS CONTRACTS.

TELEPHONE WORK.—Des Moines, Ia.—It is reported that the Iowa Telephone Co. is preparing to make extensive improvements this year.

PIERS.—New York, N. Y.—The dock board has received plans for the construction of two new piers in the Wallabout Basin, to cost about $85,000.

RED CEDAR WOOD.—New York, N. Y.—Bids are asked by the park department, Arsenal, Central Park, until Feb. 2 for furnishing about 30,000 lin. ft. of red cedar wood for rustic fences.

ROCK LIME.—Brooklyn, N. Y.—Bids are asked by the department of sewers, 265 Broadway, New York, until Feb. 8 for furnishing about 6,000 bbls. of Maine rock lime. Jas. Kane, Comr.

TELEPHONE WORK.—Newport News, Va.—The Southern States Telephone Co., Norfolk, Va., is preparing to extend a line from Newport News to Williamsburg, Va., according to reports.

CEMENT, BRICK, ETC.—Baltimore, Md.—Bids are asked by the electrical commission until Feb. 1 for furnishing cement, broken stone, brick, etc. Chas. E. Phelps, Jr., Ch. Engr.

YELLOW PINE, CYPRESS, ETC.—Providence, R. I.—Wm. M. Harris, Jr., Harris and Atwells Aves., Providence, wishes to purchase 500,000 ft. of yellow pine boards; also cypress doors and frames and cypress lumber.

PARK WORK.—Saginaw, Mich.—Mayor Baum has recommended that the land south of the Federal Bldg., and the land adjacent to the Court St. bridge on the south side of the river be improved for park purposes.

CEMENT AND STONE.—Tybee Island, Ga.—Bids are asked until Feb. 21 for furnishing Portland cement and broken stone, as stated in our advertising columns. Capt. Cassius E. Gillette, U. S. Engr., Savannah, Ga.

MOTOR VEHICLES.—Flagstaff, Ariz.—The Everett King Co., Chicago, Ill., has been awarded a contract for constructing nine 14 HP. gasoline engine moter vehicles, to be used on the road between Flagstaff and the Grand Canyon of Colorado.

TRANSPORTATION.—Manila, Philippine Islands.—Bids are asked by the war department, Washington, D. C., until Feb. 1 for transporting Spanish prisoners of war from the Philippine Islands to Spain. M. J. Ludington, Q. M. Gen., Washington.

RIVER WORK.—Syracuse, N. Y.—Russell R. Stuart, Cy. Engr., has prepared plans and estimates for deepening Harbor Brook, to cost between $10,000 and $20,000. Alderman Kearney proposed to ask the legislature to pass an act allowing the city to issue bonds for the work.

STEAM TENDERS.—St. Louis, Mo.—Maj. Thos. H. Handbury, U. S. Engr., St. Louis, informs us bids were received Jan. 14 for three steel-hulled steam tenders, from the Mississippi Valley Construction Co., St. Louis, at $65,244, and E. J. Howard, Jeffersonville, Ind., at $54,450.

TELEPHONE LINE.—Plainfield, Wis.—It is reported that the Union Telephone Co. will extend its line to Stevens Point, 23 miles north of this place. The owners of the line are B. B. Borden & Son, and F. R. Borden, of Plainfield, and M. Plank and Frank Wood, of Hancock, Wis.

LATERAL PIPES.—St. Louis, Mo.—Bids are asked until 12 m. Jan 28 for furnishing the materials and installing lateral or service pipes to connect signal boxes, buildings, etc., with the underground fire and police telegraph conduit system. Silas Benedict, Supt.; Isaac H. Sturgeon, Cy. Comptroller.

TELEPHONE WORK.—Ashland, O.—The Star Telephone Co. has been incorporated by Geo. A. Ullman, Elias J. Grosscup, Samuel H. Grabill and others, with a capital stock of $50,000. The company will control and improve the present lines of the People's Telephone Co., and construct new lines throughout the state.

CONDUIT SYSTEM.—Providence, R. I.—The Providence Telephone Co. proposes to construct a conduit system in the first building district, to include the wires of the Western Union Telegraph Co., the Postal-Telegraph-Cable Co., and the Rhode Island Electric Protective Co. An ordinance will soon be presented to the council.

TELEPHONE WORKS.—Detroit, Mich.—The Michigan Telephone Co. will establish five new exchanges in this place. It is reported that the company has let contracts for 1,000,000 lbs. of copper wire and 100,000 ft. of cable, and has also awarded a contract to the Cleveland Cedar Co., Cleveland, O., for furnishing 75,000 poles. Chas. J. Gidden, Pres.

CONDUIT SYSTEM.—Grand Rapids, Mich.—The council and board of public works are considering the question of constructing a system of underground conduits for all city wires. It has also been recommended that outside of the conduit district, all telephone wires, etc., be strung on separate poles from the electric light wires, etc. Geo. M. Ames, Cy. Engr.

PARK WORK.—Philadelphia, Pa.—Chief Engineer Vogdes, of the Park Comn., City Hall, has recommended to the park commission the expenditure of $10,000 to complete the widening of East Park drive, $16,000 for macadamizing Lincoln Ave. drive from Wissahickon Ave. to Walnut Lane, $10,000 for brick cycle paths on Chamounix drive, 25,000 for continuing 34th St. drive to Callowhill St. bridge, and $10,000 for laying new walks.

BOILERS AND MACHINERY.—St. Joseph, Mich.—We are informed that the following bids were received Jan. 20 for furnishing boilers and machinery for six steam fog signals at Waugoshance, Mich., as advertised in Engineering News: Capt. J. G. Warren, U. S. Engr., 9th Lighthouse Dist., 135 Mason St., Milwaukee, Wis.:

| Bidder. | One set of 2 boilers. | Three sets complete. |
|---|---|---|
| Ellicott Machine Co., Baltimore, Md.. | $1,500 | $6,588 |
| *Thomson Kingsford, Oswego, N.Y... | 1,965 | 7,640 |
| J. P. McGuire, Cleveland, O. | 2,208 | 8,400 |
| S. Freeman & Son Mfg.Co., Racine, Wis | 1,476 | †4,427 |
| Fulton Iron & Engine Works, Detroit. | ..... | 7,923 |

*Alternative bid, $1,965 and $7,615, respectively. †Informal.

## CONTRACT PRICES.

PAVING.—Atlantic City, N. J.—The following bids were received Jan. 16, 1899, for certain paving in the city, as advertised in Engineering News:

| Quantities. | Turner & Moore. | T. J. McGovern. | J. B. Reilly & Co. | Del. River Q. & C. Co. | Dennis Roe. | Alcatraz Pvg. Co. |
|---|---|---|---|---|---|---|
| Paving: Brick 5,025 yds. | $2.20 | $2.23 | $2.20 | $2.17 | $2.20 | $2.15 |
| Macadam ...21,340 " | .72 | .76 | .78 | .75 | .75 | .79 |
| Concrete .... 137 " | 5.00 | 4.50 | 4.50 | 5.00 | 4.50 | 4.75 |
| Curb: Straight13,840 ft.. | .40 | .45 | .49 | .46 | .49 | .47 |
| Circular .... 512 " | 1.25 | 1.10 | 1.25 | 1.12 | 1.25 | 1.20 |
| Resetting .. 100 " | .10 | .07 | .09 | .10 | .10 | .10 |

RECEIVING BASINS, ETC.—Mount Vernon, N. Y.—Harry P. McTague, Comr. Pub. Wks., writes us that the following bids were received Jan. 17, for furnishing materials and for setting certain pipe sewers; all bidders of Mount Vernon:

Bids Received at Mount Vernon, N. Y., Jan. 17, 1899, for Constructing Receiving Basins, Etc.

| Bidder. | Receiving basins, each. | Rock excavation, cu. yds. | Lateral sewers in Pearl St. 8-in. pipe, 885 ft. | Rock, 100 yds. | Manholes, 4, each. | Total. | Lateral sewers in East Sidney Ave. 12-in. pipe, 165 ft. | Rock, 2 yds. | Manhole, 1, each. | Rec'v'g basins, 2, each. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Qualman & Light | $282.00 | $92.50 | $2.00 | $0.40 | $3.50 | $35.00 | $844 | $0.50 | $0.10 | $30.00 | $5.00 | $383 |
| Charles Sillery | 370.00 | 120.00 | 5.00 | .90 | 2.00 | 30.00 | 1,117 | 1.25 | .50 | 35.00 | 125.00 | 492 |
| Peter Sheridan | 345.02 | 115.00 | .01 | .50 | 3.00 | 30.00 | 863 | 1.00 | .01 | 22.50 | 110.00 | 408 |
| Cortright & Kenlon | 297.00 | 99.00 | ... | .40 | 1.00 | 100.00 | 854 | .75 | .25 | 60.00 | 105.00 | 394 |
| Frank Nordone | 360.02 | 120.00 | .01 | .75 | 2.00 | 20.00 | 944 | .50 | .01 | 25.00 | 125.00 | 358 |

SEWERS AND FILTRATION BEDS.—Aiken, S. C.—J.T. Morgan, Mayor, informs us that the following bids were received Jan. 18 for constructing pipe sewers as advertised in Engineering News; $25,000 4% bonds were sold to W. J. Hayes, of Cleveland, O., for $26,741; soil is a firm, gritty clay with some sand on the line of the outfall sewer; no rock; contract awarded C. A. Robbe, Augusta, Ga.; N. Wilson Davis, Atlanta, Ga.:

BIDS RECEIVED AT AIKEN, S. C., JAN. 18, 1899, FOR CONSTRUCTING PIPE SEWERS AND FILTER BEDS.

| Quantities. | Irwin Bros., Hamilton, O. | Van D. Hite-Smith, Knoxville, Tenn. | Gude & Walker, Atlanta, Ga. | Sweeney & Houston, Pittsburg, Pa. | Geo. O. Tenney, Spartanburg, S. C. | Edward H. Post, Wilksb're, Pa. | Cronin & Oliver. | Chas. T. Hookway, Syracuse, N. Y. | H. Neely, Chattanooga, Tenn. | C. A. Robbe, Augusta, Ga. |
|---|---|---|---|---|---|---|---|---|---|---|
| 15-in. pipe, 6 to 8 ft. trench..... 17,400 lin. ft.. | $0.60 | $0.59 | $0.58½ | $0.47 | $0.41 | $0.45 | $0.42 | $0.40 | $0.41 | $0.44 |
| 12-in. " 6 " 8 " " ..... 200 " " | .40 | .42 | .44½ | .35 | .38 | .35 | .30 | .35 | .32 | .32 |
| 8-in. " 6 " 8 " " ..... 2,300 " " | .35 | .30 | .31 | .30 | .23 | .22 | .30 | .25 | .24 | .20½ |
| 6-in. " 6 " 8 " " ..... 3,450 " " | .18 | .27 | .24½ | .27 | .17 | .17 | .22 | .17 | .20 | .14 |
| 12-in. " 8 " 10 " " ..... 500 " " | .50 | .46 | .49 | .40 | .42 | .37 | .45 | .40 | .35 | .34½ |
| 10-in. " 8 " 10 " " ..... 1,150 " " | .45 | .41 | .41½ | .36 | .37 | .33 | .40 | .35 | .30 | .29½ |
| 8-in. " 8 " 10 " " ..... 4,375 " " | .30 | .36 | .35 | .33 | .26 | .24 | .35 | .25 | .27 | .22½ |
| 6-in. " 8 " 10 " " ..... 1,200 " " | .20 | .30 | .29 | .29 | .24 | .21 | .28 | .25 | .23 | .15 |
| 15-in. " 10 " 12 " " ..... 125 " " | .70 | .59 | .65 | .63 | .68 | .54 | .65 | .75 | .52 | .50 |
| 12-in. " 10 " 12 " " ..... 950 " " | .50 | .51 | .59½ | .56 | .51 | .43 | .51 | .50 | .40 | .38 |
| 10-in. " 10 " 12 " " ..... 650 " " | .45 | .45 | .52 | .53 | .45 | .40 | .45 | .40 | .34 | .33 |
| 8-in. " 10 " 12 " " ..... 4,800 " " | .35 | .41 | .45 | .47 | .38 | .31 | .43 | .30 | .30 | .25½ |
| 6-in. " 10 " 12 " " ..... 600 " " | .30 | .35 | .37½ | .44 | .37 | .29 | .35 | .30 | .27 | .19 |
| 15-in. " 12 " 14 " " ..... 1,225 " " | .90 | .69 | .71½ | .69 | .80 | .63 | .82 | .75 | .62 | .60 |
| 12-in. " 12 " 14 " " ..... 950 " " | .75 | .61 | .66 | .60 | .76 | .51 | .65 | .60 | .50 | .45 |
| 10-in. " 12 " 14 " " ..... 1,500 " " | .65 | .55 | .57½ | .56 | .64 | .46 | .62 | .50 | .45 | .35 |
| 15-in. " 14 " 16 " " ..... 950 " " | 1.10 | .83 | .83 | .89 | 1.10 | .84 | .90 | .90 | .75 | .65¼ |
| 12-in. " 14 " 16 " " ..... 150 " " | 1.00 | .77 | .77 | .82 | 1.05 | .73 | .80 | .70 | .65 | .49 |
| 15-in. " 16 " 18 " " ..... 150 " " | 1.40 | 1.00 | .91 | .92 | 1.50 | 1.09 | 1.00 | 1.25 | .95 | .80 |
| 15-in. " 18 " 20 " " ..... 125 " " | 1.50 | 1.10 | 1.03 | .98 | 1.65 | 1.27 | 1.15 | 1.50 | 1.00 | .96 |
| 15-in. " 20 " 22 " " ..... 250 " " | 1.50 | 1.30 | 1.12 | .98 | 2.00 | 1.52 | 1.25 | 1.75 | 1.20 | 1.00 |
| Brick in manholes ..... 195,000..... | 16.00 | 16.00 | 12.50 | 13.50 | 11.00 | 10.00 | 11.50 | 12.00 | 10.00 | 12.00 |
| Manhole covers ..... 180 each... | 6.00 | 6.00 | 7.00 | 8.00 | 7.00 | 7.00 | 5.00 | 8.00 | 6.00 | 6.25 |
| Flushtanks ..... 20 " ... | 20.00 | 30.00 | 16.50 | 15.60 | 25.00 | 31.00 | 5.00 | 15.00 | 20.00 | 25.00 |
| 15-in. cast-iron pipe ..... 24 lin. ft.. | 1.00 | 2.00 | 2.50 | 2.50 | 2.50 | 1.50 | 2.00 | 2.00 | 1.50 | 1.25 |
| Concrete ..... 100 cu. yds. | 3.00 | 6.00 | 4.00 | 4.35 | 6.00 | 4.00 | 4.00 | 3.50 | 3.75 | 3.50 |
| Excavation: Solid rock ..... 100 cu. yds. | .75 | 1.50 | 1.00 | .10 | 1.00 | 2.00 | 1.50 | .50 | .75 | 1.00 |
| " Loose rock ..... 100 " " | .25 | 1.00 | .50 | .10 | .30 | 1.50 | .75 | .25 | .65 | ... |
| " Earth ..... 1,000 " " | .30 | .20 | .20 | .20 | .25 | .40 | .25 | .20 | .30 | .12 |
| Brick at filter plant ..... 16,000..... | 30.00 | 12.95 | 12.50 | 14.75 | 12.00 | 12.00 | 11.50 | 12.00 | 12.00 | 15.00 |
| 8-in. cast-iron pipe ..... 100 lin. ft.. | .60 | .50 | 1.00 | .80 | 1.00 | .60 | 1.00 | 1.00 | .55 | .40 |
| 8-in. gate valves ..... 2 each... | 15.00 | 16.00 | 25.00 | 15.00 | 17.00 | 20.00 | 15.00 | 15.00 | 14.00 | 15.00 |
| 6-in. slide gates ..... 6 " ... | 10.00 | 9.00 | 5.00 | 5.25 | 9.00 | 1.50 | 5.00 | 5.00 | 4.00 | 4.50 |
| 12-in. " " ..... 4 " ... | 15.00 | 12.00 | 7.50 | 8.50 | 13.00 | 2.00 | 5.00 | 9.00 | 8.00 | 8.05 |
| 15-in. " " ..... 3 " ... | 20.00 | 15.00 | 8.50 | 9.50 | 18.00 | 2.25 | 5.00 | 10.00 | 10.00 | 9.33 |
| 18-in. " " ..... 2 " ... | 30.00 | 18.00 | 10.00 | 12.75 | 35.00 | 2.50 | 5.00 | 15.00 | 12.50 | 11.40 |
| Screens ..... 6 " ... | 6.00 | 5.00 | 6.00 | 5.75 | 8.00 | 7.00 | 5.00 | 8.00 | 6.00 | 8.33 |
| Clay puddle ..... 100 cu. yds. | .50 | .50 | .50 | .75 | .50 | .55 | .30 | .40 | .40 | 1.00 |
| Grubbing ..... 2 acres... | 20.00 | ..... | 25.00 | 25.00 | 100.00 | 25.00 | 10.00 | 25.00 | 20.00 | 12.50 |
| Lumber ..... 23,000 ft. B.M. | 20.00 | 18.00 | 25.00 | 13.75 | 20.00 | 25.00 | 20.00 | 16.00 | 17.00 | 15.00 |
| 4-in. tile drain ..... 1,200 lin. ft.. | .20 | .10 | .10 | .09 | .06 | .20 | .05 | .10 | .07 | .09¼ |
| Total ..... | $28,861 | $28,084 | $27,806 | $25,708 | $24,351 | $24,008 | $23,852 | $22,535 | $21,290 | $20,916 |

ELECTRIC LIGHTING.—Mount Vernon, Ind.—Edward E. Highman, of the committee on lighting, informs us that the following bids were received by the council Jan. 17, 1899, for electric lighting for 10 years; contract was awarded Wm. Gonnerman & Co., for ten years; Ford & McGregor are the present contractors, and are finishing a ten-year contract; the bids are for a light of 2,000-c. p. for a year:

| | |
|---|---|
| Ford & McGregor, Mount Vernon, Ind..... | $88.00 |
| Humphrey & Co., Columbus, O..... | 72.00 |
| William Gonnerman & Co., Mt. Vernon, Ind..... | 69.75 |

STREET CLEANING.—Indianapolis, Ind.—We are informed that the following bids were received Jan. 16, 1899, to Robt. W. Furnas, of the Indianapolis Street Sweeper Co., 220 North Pennsylvania Ave., for street cleaning; The streets to be cleaned at all times from March 15 to Dec. 15, total, $37,600; for cleaning from Jan. 1 to March 15, and from March 15 to Dec. 31, 19 cts. a 10,000 sq. ft.; on all new streets accepted during the year, $1.15 per week a 10,000 sq. ft. The Furnas blast sweepers, manufactured by the Indianapolis Street Sweeper Co., will be used.

BROKEN STONE, ETC.—Tampa Bay, Fla.—We are informed that the following contract was let Jan. 15, 1899, by Lieut.-Col. W. H. H. Benyaurd, U. S. Engr., St. Augustine, Fla., for furnishing at Mullet Key and Egmont Key, Tampa Bay, broken stone or gravel, etc., as advertised in Engineering News:

| Bidder. | Random stone, 1,200 cu.yds. | Crushed stone, or gravel, 14,000 cu.yds. |
|---|---|---|
| W. Chase Spotswood, Mobile, Ala .... | $4.95 | $3.85* |
| C. G. Smith & Son, Washington, D.C. | 3.47 | 3.83 |
| Wm. F. Bowe, Augusta, Ga. ..... | 5.96 | 5.70 |
| Fred. F. Vischer, Montgomery, Ala.. | 4.75 | 3.15* |
| National Granite Co., New York .... | 2.95 | 2.70 |
| Edw. K. Chamberlin, New York..... | 2.66 | 2.66 |
| Stewart Const'n Co., Columbia, S.C... | 3.33 | 2.95 |

*Gravel; other bids for crushed stone.

## INDUSTRIAL NOTES.

BEST, FOX & CO., Pittsburg, Pa., have the contract to furnish bronze work and fittings for a new blast furnace in the Black Sea iron district of Southern Russia.

THE EASTERN PAVING BRICK CO., Catskill, N. Y., will remove its New York office Feb. 15, from the Bowling Green Building, 11 Broadway, to Room 1312, Empire Building, 71 Broadway.

F. L. SMIDTH & CO., 66 Maiden Lane, New York, has the contract to supply the Smidth ballmills and the Davidsen patent tubemills for the new plant of the Coplay Cement Co., Coplay, Pa., which will have a daily capacity of 1,200 bbls.

THE MORGAN ENGINEERING CO., Alliance, O., announces that it has found it expedient and to the advantage of its customers to sell its product direct and not through agencies, and that it has therefore terminated the agreement existing between the Niles Tool Works Co., Hamilton, O., and itself. Until further notice all communications should be directed to the home office, Alliance, O.

THE DENVER ENGINEERING WORKS CO., Denver, Colo., has an order from Mr. John Campion to build a 12x14 in. high-speed steam engine direct-connected to a 60 K-W. general electric dynamo for an electric lighting plant to be built at Ibex, Colo., four miles from Leadville. The plant will supply electricity for 10 arc lights and 1,000 incandescant lamps. Mr. Eugene Y. Sayer is the electrical engineer of the company.

THE WESTINGHOUSE ELECTRIC & MFG. CO., Pittsburg, is reported to have a contract to equip a large cotton mill near Manchester, England, with two alternating current dynamos and 21 motors, aggregating 310 HP., at a cost of about $100,000.

THE WARREN ELECTRIC & SPECIALTY CO., Warren, O., will increase its capital from $50,000 to $100,000 for the purpose of manufacturing fan motors and transformers. A new building has been erected for the purpose. Mr. E. W. Gillmer is the Secretary of the company.

THE E. P. ALLIS CO., Milwaukee, Wis., is reported to have an order from the Alabama Steel & Wire Co., Birmingham, Ala., for two engines of 1,500 and 3,000-HP. respectively. The Allis company is also said to be building electric street railway engines for Grand Rapids, Mich., and Toledo, O.

THE PRESSED STEEL CAR CO., Pittsburg, the incorporation of which was noted in our last issue, is reported to have orders for 7,000 steel cars, of which 5,000 are for the Baltimore & Ohio R. R., and will cost about $4,000,000. Mr. Edwin A. Schoen has been elected General Manager of the company.

THE DEUTSCH BABCOCK & WILCOX DAMPSKESSELWERKE GESELLSCHAFT is the name of a new company just organized in Berlin, Germany, with $500,000 capital, according to report, to manufacture Babcock & Wilcox boilers. It is said that a large part of the capital will be spent for modern tools and machinery.

THE BERLIN IRON BRIDGE CO., East Berlin, Conn., has just shipped a highway bridge of 200-ft. span and 40 ft. wide to the Hawaiian Islands, which is said to be the first American bridge ever built in those islands. The company has established an agency in Honolulu, H. I., and also agencies in Guadolojara, Mex., and Berlin, Germany.

THE HANCOCK INSPIRATOR CO., Boston, Mass., manufacturer of specialties in steam, water, air and gas, has appointed Mr. Manuel J. Martinez, M. Am. Soc. M. E., of Yonkers, N. Y., Resident Agent at Havana, Cuba. The business will be conducted under the style of M. J. Martinez, Consulting and Contracting Engineer. We noted the appointment of Mr. Martinez as Resident Agent for the Aultman & Taylor Mfg. Co., Mansfield, O., in our issue of Jan. 12.

THE DODGE MFG. CO., Mishawaka, Ind., manufacturers of wood split pulleys, rope driving, power transmitting and grain handling machinery, has purchased the interests and good will of the Rice Machinery Co., 166 to 174 South Clinton St., Chicago, and will continue the latter business. The personnel of the business will be the same as formerly, the change being simply in name. The Dodge Mfg. Co. reports excellent business throughout the country, and states that its branch stores in New York, Boston, Chicago, etc., are busy. The factory at Mishawaka continues in operation day and night, and the increased its capitalization from $1,000,000 to $1,900,000, the building, 80 x 300 ft., during the latter part of 1898.

ONE OF THE LARGEST BRIDGE CONTRACTS that has been awarded in many years has been let by the Receivers of the Baltimore & Ohio R. R., in order to place the lines west of the Ohio River in proper shape to handle the heavy freight equipment that is being used east of the river. The receivers have found it necessary to rebuild 51 bridges between Bentwood, W. Va., and Chicago, and that the structures might be rapidly completed the work has been divided among three companies as follows: The Youngstown Bridge Co., Youngstown, O., 31 bridges on the Central Ohio Division, between the Ohio River and Newark, O.; the Pencoyd Iron Works, Philadelphia, eleven bridges on the Lake Erie Division, between Newark and Sandusky, O., and the Edge Moor Bridge Works, Wilmington, Del., nine bridges on the Chicago Division. The total cost will be about $300,000, and it is expected that work will be completed by next September. Nearly 6,000 tons of steel will be needed for the structures.

THE Q & C CO., of Chicago, reports that its works at Chicago Heights now comprise three buildings, 225 x 65 ft., two of these being recent additions. Besides the plant for general manufacturing purposes, the works include a pressed steel department with stamping plant having a number of very large presses, this plant being operated by a rope transmission system. There are also a brass foundry, blacksmith shop, nickel-plating department, galvanizing department, grinding department, pattern shop and drafting room. Power is supplied by two engines, of 150 and 200 HP., and the boilers are fitted with the Scott boiler feeder, which is one of the company's specialties. An air compressor is used to operate light machinery and to test all the tools manufactured. There is an electric light plant, supplying current for arc and incandescent lamps, and the shops are fitted with the Bayley system for ventilation in summer and heating by hot air in the winter. About 200 men are employed. Among the latest specialties taken up by this company are the Ridgeley & Johnson pneumatic tools for riveting, calking, etc.

THE NATIONAL CARBON CO., of New Jersey, is the name of a new corporation that will be formed by the consolidation of the following companies manufacturing carbon supplies, particularly electric light carbons, carbon brusnes for motors and electrolytic carbons for all varieties of smelting purposes: The National Carbon Co., Cleveland, O.; Brush Carbon Works, Standard Carbon Works, Crouse & Tremaine Carbon Co., Postoria, O.; Thomson-Houston Carbon Co., Fremont, O.; Faraday Carbon Co., Jeanette, Pa.; Phoenix Carbon Co., St. Louis, Mo.; American Carbon Co., Noblesville, Ind.; Washington Carbon Co., Pittsburg, Pa., and Partridge Carbon Co., Sandusky, O. These companies are said to include the entire active carbon industry of the United States and three-quaarters of the carbon industry of the world. The new company will also own, it is said, a half interest in the Ottawa Carbon Co., Ottawa, Ont. The capital stock will be $10,000,000, of which $4,500,000 will be preferred and $5,500,000 common stock. Mr. Arthur J. Eddy, Chicago, is the promoter of the enterprise, and the main office will be located in Chicago.

THE PITTSBURG REDUCTION CO., Pittsburg, has increase in trade has necessitated the adding of a new brick extra $600,000 to be issued in 6% cumulative dividend preferred stock. This additional capital is to be expended in increasing the capacity of the Niagara works of the company to 75% over its present production. Two 14-in. and four 10-in. trains of rolls will also be installed at New Kensington, Pa.; a plant for manufacturing alumina will be put in, and the facilities for the aluminum business will be generally increased.

Nearly Every Prominent Contractor and Manufacturer of Contractors' Supplies READS ENGINEERING NEWS

AVAIL YOURSELF OF THIS PAPER WHEN BIDS ARE WANTED FOR CONSTRUCTION OR FOR FURNISHING SUP